World War Three – Chapter 10

The area the US Carrier Strike Groups was primarily +15 hours from Mountain Home. Primarily because they spread out to prevent the Chinese, or North Korea for that matter, from eliminating all of the groups with a single nuclear tipped SS-N-22. Like Patton said in the movie, *Rommel, you magnificent bastard, I read your book*! ['Infanterie greift an']

During WW II, Bull Halsey was duped into chasing the Japanese. In October 1944, amphibious forces of the US Seventh Fleet carried out General Douglas MacArthur's major landings on the island of Leyte in the Central Philippines. Halsey's Third Fleet was assigned to cover and support Seventh Fleet operations around Leyte.

In response to the invasion, the Japanese launched their final major naval effort, an operation known as 'Sho-Go', involving almost all their surviving fleet. It was aimed at destroying the invasion shipping in the Leyte Gulf. The Northern Force of Admiral Ozawa was built around the remaining Japanese aircraft carriers, now weakened by the heavy loss of trained pilots. The Northern Force was meant to lure the covering US forces away from the Gulf while two surface battle-groups, the Center Force and the Southern Force, were to break through to the beachhead and attack the invasion shipping. These forces were built around the remaining strength of the Japanese Navy, and comprised a total of 7 battleships and 16 cruisers. The operation brought about the Battle for Leyte Gulf, the largest naval battle of the Second World War and, by some criteria, the largest naval battle in history.

The Center Force commanded by Vice Admiral Takeo Kurita was located October 23 coming through the Palawan Passage by two American submarines, which attacked the force, sinking two heavy cruisers and damaging a third. The following day Third Fleet's aircraft carriers launched strikes against Kurita's Center Force, sinking the battleship Musashi and damaging the heavy cruiser Myōkō, causing the force to turn westward back towards its base. Kurita appeared to be retiring but he later reversed course and headed back into the San Bernardino Strait. At this point Ozawa's Northern Force was located by Third Fleet scout aircraft. Halsey made the momentous decision to take all available strength northwards to destroy the Japanese carrier forces, planning to strike them at dawn of October 25. He considered leaving a battle group behind to guard the strait, and made tentative plans to do so, but he felt he would also have to leave one of his three carrier groups to provide air cover, weakening his chance to crush the remaining Japanese carrier forces. The entire Third Fleet steamed northward. San Bernardino Strait was effectively left unguarded by any major surface fleet.

[Halsey was portrayed by James Cagney in the 1959 bio-pic, *The Gallant Hours*; by James Whitmore in the 1970 film, *Tora! Tora! Tora!*; and by Robert Mitchum in the 1976 film, *Midway*. Halsey has been portrayed in a number of other films and TV miniseries, played by Glenn Morshower, *Pearl Harbor*, 2001, Kenneth Tobey, *MacArthur*, 1977, Jack Diamond *Battle Stations*, 1956, John Maxwell, *The Eternal Sea*, 1955 and Morris Ankrum *Thirty Seconds Over Tokyo*, 1944. Cagney even resembled Halsey.]

Not all of the SS-N-22s were intercepted and a group of 3 Japanese Flight IIa DDGs was taken out with a nuclear tipped Sunburn. The Japanese launched 1 theatre ballistic missile (maximum range 3500km) with a 1mT warhead against China, aimed at the Three Gorges Dam, destroying it and releasing 32 million acre-feet of water which destroyed everything on its 1,600 km journey to Shanghai. Japan already has the missiles. Keep in mind the movie *Force 10 from Navarone*. Water doesn't compress and see: http://en.wikipedia.org/wiki/Japanese_nuclear_weapon_program

China, already smarting from the 4 warhead attack on Beijing, launched a salvo against major Japanese cities. The Japanese were able to intercept many, but not all, of the missiles using PAC-3 and RIM-161 Standard Missile 3. One US SSGN, outfitted with TLAM-N missiles retaliated against China. As part of his September 1991 "Presidential Nuclear Initiatives," President George H. W. Bush ordered the Navy to "withdraw all tactical nuclear weapons from its surface ships and attack submarines." This included all nuclear-armed Tomahawk Land Attack Missiles (TLAM-N) deployed on US ships, including some Los Angeles-class attack submarines. Nuclear Tomahawk has been in storage since the Navy completed the withdrawal in early 1992.

Obviously, the TLAM-Ns were never fully retired although the US Navy attempted to retire them fully by the end of 2013. A SSGN carries 154 Tomahawk cruise missiles. The missiles carry a W80-0 warhead. The W80-0 is a small thermonuclear warhead (fusion or, more descriptively, two-stage weapon) in the enduring stockpile with a variable yield of between 5 and 150kT of TNT.

[All's fair in love and war? Maybe as a generalized statement, but really! Cliché In some situations, such as when you are in love or waging war, you are allowed to be deceitful in order to get what you want. Often said as an excuse for deception.]

The Tomahawk had qualities that made it a very good choice: it was subsonic, it cruised at a low altitude and the TLAM-N required 7 terrain matches to arm its warhead. Even if only 150 of the 154 made it to their targets they would do a lot of damage at 150kT per.

Already smarting from the 2 major strikes, China picked up on the Tomahawks and launched their entire remaining fleet of nuclear ICBMs against the US, including those JL-2s. The US had deployed the THAAD, Ground-Based Midcourse Defense (GMD) and Land based Aegis Ballistic Missile Defense System using SM-3 and PAC-3 systems.

Not all of the PRC missiles were successfully launched. Enough were that the NWS EAS SAME radios were activated with the announcement that Space Command had detected incoming missiles from China and that the US was making a full retaliatory response and citizens were advised to shelter against possible strikes; I was surprised they didn't say *Duck and Cover*.

We had completed our mission to Little Rock the day before and were in the process of unloading the 150 cartons of filter kings into the shelter. We couldn't have cut it closer had we wanted to. While we moved food from the refrigerator/freezer to the shelter and emptied the pantry contents into additional laundry baskets, Steve pulled in with a female passenger. Both of them began unloading the STS food supplies he had followed by his weapons, ammo and PPE.

"I picked up some additional equipment. This is Melody, we're dating. All I could get on short notice was a Ruger SR-556, Browning Hi-Power, extra magazines and some surplus M855 and 9mm ball.

"Judy, Melody. Melody, Judy, Smoke's wife and Smoke of course."

Twenty one years for 3 equals 7, while 21 years for four equals 5. At least she was smoking Marlboro's, of which we had 6 cartons. Then Steve drug in 60 more cartons of Marlboros, maybe a 6-8 month supply, depending their usage rates. Two days before we'd packed up the Kool's, labeling my original with the notation SL and her supply FK. We'd need to pack up the other 150 cartons and label them FK. I'd left out 30 cartons and Judy had done the same. Only she and I knew about our cigarette inventory.

"Let's get locked down and watch the end of civilization as we know it."

"Is that the same as TEOTWAWKI?"

"Nope. That's the end of the word as we know it. Unless someone has a doomsday device, I doubt the world will be destroyed."

"But, *On The Beach*…"

"Was a war protest book by Nevil Shute."

We hooked up the remote area monitors, AMP 50, AMP 100 and AMP 200. The reason most authors tell you to use the reading one hour after peak is because of the short lived isotopes. However, if you're any distance from the detonation, those short lived isotopes don't make it to wherever you are. At the moment of detonation, the instant radiation can be as high as 10,000R/hr. As soon as the short lived isotopes decay, the ground zero radiation is ~3,000R/hr.

I went down my checklist and the PV panels were putting out 99% and the Wind Turbine ~80% because the wind was down a bit. The battery bank was at 99.25% and I cut the manual grid tie switch. While the grid tie went through an ATS, there was an in-line manual switch between the ATS and the grid. I got Steve to sit at the communications table and watch the monitors. I also connected a spare NWS EAS SAME radio to a long wire antenna using an alligator clip.

"Did you bring in your radios Steve?"

“Damn…”

“Let’s get them. I forgot to get ours from the cabin too.”

All of our vehicle radios were on slide mounts and easy to remove. There was no radiation, yet, above background. So, we opened the blast door and scampered to get the things we’d overlooked. Five minutes later, we were securing the blast door, again. The first radiation took a bit to get to Mountain Home. The average wind speed was 12-13mph, westerly and the needle came off the peg around 26 hours and 45 minutes after we entered the shelter.

“That’s about 330 miles, give or take. Anything significant 330 miles west of us?”

“Oklahoma City and Tinker AFB. Tinker is the headquarters of the Air Force Matériel Command’s Oklahoma City Air Logistics Center, which is the worldwide manager for a wide range of aircraft, engines, missiles, software and avionics and accessories components. Defense Mega Center Oklahoma City is the local branch of the Defense Information Systems Agency. The Mega center operates computer systems for the base and serves 110 other bases in 46 states. That’s a critical installation.”

“And the bonus is Oklahoma City’s metro population of about 1.4 million. Good target and the radiation should peak at 60R/hr.”

“So, we’ll be out of here in no time.”

“It doesn’t work that way. Be that as it may, we’ll just trust the area monitors.”

Melody and Judy were getting to know each other and I could see something approaching disapproval on Judy face.

“What’s wrong? Do you know her?”

“We’ve never been formally introduced before if that’s what you asking. It’s more what I know about her. She’s a barfly, moving from one man to another as long as they keep her fed and liquored up. She doesn’t work that I know of unless it’s on her back. Steve is in for a rude awakening.”

“The liquor is under lock and key and Steve doesn’t know where it’s stored.”

“Where is it stored?”

“That cabinet in the storeroom labeled ‘medical supplies two’. Alcohol is sort of a pain killer so it’s a medical supply.”

“Sneaky.”

“For a while I was worried about Steve having an alcohol problem and made it a point not to tell him where the liquor was stored.”

“Are we going to be alright?”

“If we don’t get any more radiation than what we’re getting, I think so. That’s assuming that China attacked us and Russia doesn’t get involved. China was the 3rd largest known nuclear power. The Russian’s have more weapons in their reserve than we do. However, if we got those SSBNs fully rearmed and used something other than those Minuteman III missiles against China, the US still has its pre-treaty nuclear capacity. If they installed all of the W87 warheads on the Minuteman missiles and cranked them up to a full yield of 475kT, that’s about 214mT we can throw at a target. Add to that 268.8mT from the boomers, assuming what we discussed happened, and the total is about 482.5mT.”

“How many missiles?”

“Seven-hundred eighty-six.”

“What was that term you used, TEOCAWKI? It would appear that that just might happen.”

“I have an opposite view, now. The more I think about Russia, the less inclined I am to believe they’ll get involved unless China or the US attacks them. While we can’t count out the possibility that China attacked Russia, the Chinese just don’t have enough ICBMs to go around.”

“So, is it or isn’t it World War Three?”

“Oh yeah, no doubt about it. While it’s not a conventional World War, it is a World War and has to be the Third.”

“What’s it going to be like when we get out of the shelter?”

“That depends on how long we have to stay here. Worst case, we’ll have to shelter about 9 months. The radiation decay is timed from the time of detonation. In this case it was 26¾ hours before we got our first indication of radiation, and the long term isotopes began to decay at that time, or an hour later, according to the 7-10 rule. That says that for every 7th interval in time the radiation decreases 90%. At 7 hours, it’s 10%, at 7×7 hours, it’s 1%, at 7×7×7 hours, it’s 0.1% and so forth.”

“Then at 60R/hr we’ll be out of here soon.”

“Like I told Steve, it doesn’t work that way.”

“We received 60R/hr 26¾ hours after the warhead detonated. Let me show you TOM’s spreadsheet. Now, I enter 3,000R/hr in the box and move down one space. In the hours column it shows 27.33 and in the right column it shows 59858mR/hr. Divide by 100 and you get 58.86R/hr. That’s close enough to estimate when we can leave. Go down the last column until the number is below 104 and what do you see?”

“Uh, 94.868.”

“Right. Now move back to the hours column and what’s the number?”

“It’s 6,352.45.”

“That’s right and the previous reading in the far right column is 119.432. The difference between the two lines is 24.564. Half of that is 12.482 and 119.432 minus 12.482 is 106.95 which is close enough. To get the difference in the number days in the higher row and deduct the lower row. Divided the difference by half and add that to the number of days in the upper row to get the approximate number of days until we can leave.

“We can go out earlier if we have to for short periods if necessary. We risk getting cancer if we go out too soon, but at our age, it may not matter.”

“I don’t know if I can put up with her for eight months.”

“I have feeling that Steve won’t want to stay long if we can’t keep her in liquor. I have a bottle of Everclear that actually is for medical purposes that I can give him and tell him the well is dry. If you’re right about her, she won’t stay and Steve will go with her under some excuse.”

About 3 weeks into the stay, Melody was about to pull her hair out. Steve came to me and asked if I had any liquor because the beer was gone. I told I had one bottle of medicinal alcohol 190 proof, but only one. I’d get it when I could and slip to him, but it wasn’t sippin’ whiskey. That managed to last about 3 more weeks when he was back.

“Sorry dude, I only had the one bottle.”

“I’ve been watching those monitors and they’ve come down from about 60 to about 0.8. I think we’ll just get our things around and head to town.”

“It’s too early to go out.”

“You’re just saying that Smoke, what do you know about it?”

“Only what I’ve read.”

“I think I’ll get our short term supplies, my armory and we’ll be leaving.”

“You had 4 months for one and the two of you have gone through all but about 4 weeks’ worth of food. I’ll have Judy set it out for you while you move your other things topside.”

“Thank you.”

“Judy will you please box up 4 weeks’ worth of STS foods for Steve and Melody?”

“Yes, give me a hand.”

“Sure.”

“Once in the storeroom she asked, “Are you nuts? The radiation is barely below 800mR/hr.”

“I know and so does Steve. I think he must have slept through the NBC classes. I’d like to tell him not to lose his head over a little piece of tail but it’s not my place.”

“He’s thinking alright, with the wrong head.”

And, so he was, a not uncommon male failing. Every time Judy looked at Melody she had a little more fire in her eye and it had only gotten worse as time passed. Steve came to me about his firearms. He could give me a real deal on a Tac-50, with ammo because he was about tapped out.

“Hard times Steve, I can go 12 thousand.”

“Ok, I guess.”

“Gold or cash?”

“What do you figure gold is worth?”

“Maybe $2,500.”

“Okay, 5 ounces.”

“What denominations?”

“Tenths?”

“Let me get you fifty out of the safe.”

I counted out the tenth ounce Eagles and he handed me the Pelican case containing his Tac-50A1R2, suppressor, scope and MUNS. The ammo was still stored with the other ammo.

“Once you get to town, try to find someplace to shelter like the Courthouse.”

I could have only paid the twelve-thousand, but I got a deal and knew it. That gave us two .50 caliber rifles and the Tac-338, plus the M1As and H&Ks. We stayed in the shelter until the meters read 100mR/hr. The generator had only kicked in a few times and cutoff when the batteries were back to a full charge. We were in the shelter for 8½ months.

While we waited for the radiation to decay, we were on the radio a lot. It may have been Thermonuclear and World War Three, but only three countries were apparently involved China, Japan and the United States. We got all of the Chinese ICBMs and about three-fifths of their SLBMs having sunk 3 subs before they could launch. Russia had stayed out of it as far as anyone knew.

The US still had its full complement of Ohio-class SSGNs and SSBNs. The SSBNs had their full complement of missiles, however many that was and one SSGN put into port to reload all the Tomahawk missile tubes.

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Born of a three-way marriage of early Cold War strategic necessity, World War II progress in underwater acoustics, and an extraordinary engineering effort, the Navy’s pioneering Sound Surveillance System – SOSUS – became a key, long-range early-warning asset for protecting the United States against the threat of Soviet ballistic missile submarines and in providing vital cueing information for tactical, deep-ocean, anti-submarine warfare. And although subsequent events – most notably the end of the Cold War – robbed SOSUS of much of its mission, its history remains an object lesson in how inspired, science-based engineering development can lead to extraordinary operational effectiveness.

Indeed, rudimentary passive and active sonar techniques had already been used in World War I to search for submarines, but these earliest systems, at relatively high frequencies, achieved detection ranges of only several thousand yards under favorable conditions – and World War II sonars seldom did much better. The basic physical phenomena subsequently exploited in SOSUS to achieve longer-range submarine tracking were only discovered in the late 1930s and not adequately understood until mid-way through the 1939-1945 war.

An important early step in developing more effective sonar systems – and SOSUS in particular – was the invention of the sonic depth finder (SDF) in the early 1920s as a direct outgrowth of the rudimentary active sonars used in World War I. Not only did the SDF advance the state-of-the-art in acoustic technology, but it also facilitated detailed depth and ocean-bottom surveys with a speed and accuracy never before available using lead-line techniques. This, in turn, led to growing interest in marine geology and the adaptation of seismic methods developed for use on land to geological exploration of the sea floor. It was in this context in 1937 that Lehigh University scientist Maurice

Ewing made a seminal observation while doing seismic refraction experiments in three-mile-deep water in the North Atlantic. Using underwater explosive charges as sound sources, Ewing noted that a chain of impulsive echoes – generated by repeated reflections between the ocean bottom and the sea surface – was clearly perceivable onboard his research vessel. From this result, Ewing reasoned that even allowing for a significant loss of sound intensity at each bottom and surface encounter, the sound signal of the charge – particularly at the lower frequencies – was capable of traveling great distances underwater with only limited attenuation. He further postulated that if there were horizontal sound propagation paths in the deep ocean that avoided surface and bottom reflections – a so-called "deep sound channel" – acoustic signals could travel hundreds, or even thousands, of miles and still be detectable by judiciously located hydrophones.

Almost simultaneously, another crucial element appeared with the invention and refinement of the bathythermograph by scientists at the Massachusetts Institute of Technology (MIT) and the Woods Hole Oceanographic Institution. For the first time, the bathythermograph made possible the continuous measurement of ocean temperature with depth – and most importantly, the determination in detail of how underwater sound speed varied with distance below the surface – the sound velocity profile (SVP). In conjunction with numerous in situ measurements of the SVP, growing theoretical understanding of how underwater sound "rays" are refracted – or bent – by vertical variations in the sound velocity provided the analytical tools to support Ewing's hypothesis of long-range propagation paths under certain conditions of ocean temperature and depth.

In general, in warmer waters near the ocean surface, the sound speed is relatively high. At greater depths, where the water is increasingly cooler, the sound velocity decreases toward a minimum. At that point, pressure effects take over, and the sound speed begins to rise again as depth continues to increase. The deep sound channel is found at the depth where the sound velocity is a minimum. Because sound "rays" always tend to bend away from regions of higher sound velocity, a wave directed upwards from the sound channel axis will be refracted back down again – and a wave directed downwards will be bent upwards. Thus, sound paths from sources in the deep sound channel weave back and forth across the channel axis and – because they become "trapped" in a deep ocean layer away from the surface or bottom – can travel long distances with minimum attenuation. Moreover, if there exist propagation mechanisms available to bring near-surface sound down to the depth of the sound channel, those signals will also become trapped and traverse long distances with minimal loss. The sound channel axis is normally found at a depth of several thousands of feet, depending on thermal conditions, and because of the unusually warm waters of the Gulf Stream and Sargasso Sea, it lies more deeply in the Atlantic than in the Pacific.

As part of the upsurge of ocean-acoustic research that accompanied the coming of World War II, Ewing and his colleagues performed a variety of at-sea experiments that further confirmed sound propagation in the deep sound channel, while also discovering the phenomenon of the near-surface convergence zone. On the basis of these experiments, Ewing proposed in 1943 that the Navy develop a system for communicating over long ranges by detonating time-coded explosive charges in the sound channel itself.

Accordingly, during the spring of 1944, he supervised a major sea test in which USS Buckley (DE-51) steamed outward from a stationary receiving ship, periodically dropping small explosive charges fused for various depths. These explosions were still clearly discernable until Buckley had to break off the trial at a distance of 900 miles. By the end of the war, the Buckley experiments had led to a subsequent effort to develop an air-sea rescue system known as SOFAR – for Sound Fixing and Ranging. In the SOFAR concept, downed pilots would drop small explosive charges to the depth of the deep sound channel, where their sound output could be expected to travel for thousands of miles to deep, bottom-mounted hydrophones and triangulated to locate the survivors. At the time, however, exploiting the SOFAR channel for submarine detection at long range seems not to have been suggested, although by mid-war, the US Navy was already using ray-tracing methods tactically for sonar performance prediction.

Even after World War II ended in mid-1945, the Navy continued to support a strong research program in underwater acoustics and, in particular, made enough additional progress in understanding the deep sound channel to establish – with the Army Air Force – major SOFAR networks in both the Pacific and Atlantic. However, with the onset of the Cold War and the growing danger of a Soviet submarine force based on the best of German World War II technology, the application of underwater sound specifically to anti-submarine warfare (ASW) became a top priority. By early 1950, the Navy had come to believe that Soviet submarines posed the greatest threat to America's security and approached the Committee on Undersea Warfare (CUW), an academic advisory group empanelled in late 1946, for suggestions on studying the problem. The result was Project Hartwell, a series of MIT-organized technical meetings attended by top-level scientists and naval officers during the first half of the year. Not unexpectedly, long-range submarine detection was among a variety of undersea warfare topics discussed by the Hartwell participants. In this regard, physicist Frederick Hunt, former head of Harvard's Underwater Sound Laboratory, electrified the gathering with a convincing argument that Ewing's SOFAR channel could support long-range propagation modes sufficient for detecting submarines passively at distances of hundreds of miles. Moreover, frequencies below 500 Hz would penetrate readily to the deep sound channel from virtually any source depth. This insight – not universally accepted at the time – formed the scientific basis for SOSUS and made possible long-range undersea surveillance surprisingly early in the post-war era.

As a key result of the Project Hartwell findings, the Office of Naval Research (ONR) in late 1950 funded a contract with the American Telephone and Telegraph company (AT&T) and its manufacturing arm, Western Electric, to develop an undersea surveillance system based on long-range sound propagation. Under this aegis, Bell Telephone Laboratories initiated a series of experimental trials by installing undersea listening arrays off Sandy Hook, New Jersey and Eleuthera in the Bahamas. Additionally, AT&T adapted its sound spectrograph, which had recently been invented as a tool for analyzing speech sounds, into a similar device called LOFAR – for Low Frequency Analysis and Recording – designed to analyze low-frequency underwater signals in near-real time. Both LOFAR and the spectrograph generated a frequency-versus-time representation of an incoming sound "bite" on which the time history of its spectral content was

indicated by the blackening of specially-sensitized paper by an electrostatic stylus that swept repeatedly along the frequency axis. In this way, the presence of distinctive submarine sound signatures – comprising both broadband noise and discrete frequency components ("tonals") – could be discerned against the ocean background in the composite signal picked up by an array. This body of work, largely at AT&T, was codenamed Project Jezebel and placed under the direction of CAPT Joseph Kelly at the Bureau of Ships.

Meanwhile, the Navy continued to support Maurice Ewing, by then at Columbia University's Hudson Laboratory, to study the general phenomenology of low-frequency underwater sound. This effort, augmented by additional work at Woods Hole and the Scripps Institution of Oceanography in California, was focused on establishing a solid understanding of long-range sound transmission and denoted Project Michael. When the findings of Projects Jezebel and Michael were brought together for the purpose of designing, engineering, and deploying the broad-area surveillance system envisioned by Hartwell's Frederick Hunt, the resulting effort – with the highly classified acronym, SOSUS – was eventually given the unclassified designation, Project Caesar.

The first prototype of a full-size SOSUS installation – a 1,000-foot-long line array of 40 hydrophone elements in 240 fathoms of water – was deployed on the bottom off Eleuthera by a British cable layer in January 1952. After a series of successful detection trials with a US submarine, the Navy decided by mid-year to install similar arrays along the entire US East Coast – and then opted two years later to extend the system to the West Coast and Hawaii as well. These early SOSUS line arrays were positioned on the sea floor at locations that accessed the deep sound channel and oriented at right angles to the expected threat axis. Their individual hydrophone outputs were transmitted to shore processing stations called "Naval Facilities" – or NAVFACs – on multi-conductor armored cables.

At the NAVFACs, the acoustic signals were processed to create a fan of horizontal "beams," each of which represented the composite sound signal from a small angular sector – on the order of two to five degrees wide – oriented in a particular azimuthal direction. Narrow-band time-frequency analysis in the spectral region was performed on these multiple beam outputs simultaneously using the LOFAR technique described above. The ability of narrow-band frequency analysis not only to discriminate against broadband ocean noise but also to identify characteristic frequencies associated with rotating machinery was key to detecting and classifying targets. A LOFAR analyzer was associated with each beam of each array served by a NAVFAC, and typically, the large watch floors were filled with hundreds of these "gram-writers" busily turning out LOFARgrams on "smoky paper" 24 hours a day. These records were scrutinized continually by specially-trained personnel looking for the distinctive submarine "signatures" which gave indication of a possible target along a given bearing line. Then, if simultaneous contacts were gained on multiple arrays in separated locations, the target's position could be estimated by triangulation.

The first NAVFAC built by the Caesar program was commissioned in September 1954 at Ramey Air Force Base in northwestern Puerto Rico. Before the end of the year, similar stations were in operation at Grand Turks and San Salvador in the Bahamas, and by late 1957, additional NAVFACs had been established at Bermuda, Shelburne (Nova Scotia), Nantucket, Cape May, Cape Hatteras, Antiqua, Eleuthera, and Barbados. A glance at the map of the eastern North Atlantic makes clear the rationale for siting these first-generation listening facilities. They form a huge semicircle from Barbados to Nova Scotia, opening toward the deepwater abyss west of the mid-Atlantic Ridge. This provided both excellent coverage of the deep ocean basin off the eastern seaboard and the opportunity for contact correlation among arrays with widely separated vantage points. For optimum acoustic coupling with the deep sound channel, the arrays "looked" outward from the edge of the continental shelf, and because cable lengths were limited to somewhat less than 150 miles, the NAVFACS had to be located at coastal sites where the shelf break came closest to land. Two years later, this concept of operations was expanded to incorporate a SOSUS station at Argentia, Newfoundland to process the outputs of a number of shallow-water arrays south of the Grand Banks.

The year 1957 also saw the extension of SOSUS to the Eastern Pacific, with the installation of NAVFACs and associated arrays at – from south to north – *San Nicholas Island*, Point Sur, and Centerville Beach, California; Coos Bay, Oregon; and Pacific Beach, Washington. Still later, additional arrays would be terminated at Guam, Midway, Adak (in the Aleutians), and Barber's Point near Honolulu.

Operationally, the Navy intended SOSUS to provide early warning of hostile submarines entering the North Atlantic or Eastern Pacific, as well as generating "cueing" information for area ASW forces. By combining bearing data from separated arrays "holding" the same contact, geographic "probability areas" of target position could be calculated and passed to patrol aircraft, surface ships, or submarines to facilitate reacquisition of the target for fine localization and prosecution. This concept of operations necessitated the establishment of regional SOSUS Evaluation Centers – later called Naval Oceanographic Processing Facilities (NOPFs), with the first two at Norfolk and New York – that correlated contact information from multiple NAVFACs with other intelligence sources, such as radio direction-finding. The NOPFs then forwarded the resulting target position estimates and probability areas to local and regional ASW commands.

The primary threat against which SOSUS was originally designed was snorkeling Soviet diesel submarines at the surface, and the system's key technical characteristics – such as frequency coverage – were established accordingly. Fortunately, the resulting capability proved even more effective against deep-running Soviet nuclear-powered submarines when the first of these went operational in 1958. In a 1961 demonstration of the capabilities of the system, SOSUS tracked the USS George Washington (SSBN-598) across the North Atlantic on her first transit from the United States to the United Kingdom. Then, in June 1962, NAVFAC Cape Hatteras achieved the first SOSUS contact on a Soviet diesel submarine, to be followed a month later with the first detection of a Soviet nuclear boat west of Norway by NAVFAC Barbados. Later that year, during the Cuban Missile Crisis, the first positive correlation with a visual sighting was made, when a

patrol aircraft confirmed the presence of a Russian FOXTROT-class submarine that had already been detected by NAVFAC Grand Turks. In 1968, NAVFAC Keflavik made the first SOSUS detections of Soviet CHARLIE- and VICTOR-class nuclear submarines, and that same year, SOSUS played a key role in locating the wreckage of USS Scorpion (SSN-589), lost near the Azores in May. Moreover, SOSUS data from March 1968 facilitated the discovery and clandestine retrieval years later of parts of a Soviet GOLF-class submarine that foundered that month north of Hawaii.

Subsequently, as increasing numbers of Soviet submarines from bases in the Barents and White Seas achieved access to the North Atlantic by rounding northern Norway and steering south through the Greenland-Iceland-United Kingdom (GIUK) gap, the decision was taken to extend SOSUS into more northerly waters, and new NAVFACS were established at Keflavik, Iceland in 1966 and Brawdy, Wales in 1974. Also, better processing and cable technology allowed siting arrays farther from shore and using "split array" techniques in which a single line array was divided into segments whose outputs were processed separately and then re-combined electronically to achieve narrower beams and greater directivity. In 1974, Keflavik was the first NAVFAC to detect a DELTA-class Soviet SSBN as it moved down into the North Atlantic.

As the Cold War deepened, and both the size and capability of the Soviet submarine fleet continued to grow, SOSUS became "the secret weapon" that enabled US ASW forces to keep close track of virtually all potentially hostile submarines operating in the deepwater regions off both coasts. This capability was facilitated by geographical constraints that forced Soviet submarines into predictable deployment patterns and the rudimentary state of Russian acoustic quieting, which left their submarines some 30 dB noisier than US counterparts – and hence easily detectable from thousands of miles away. In the mid-1980s, the network of fixed SOSUS arrays was augmented by a small fleet of civilian-manned, ocean-going, acoustic surveillance ships deploying the Surveillance Towed Array Sensor System (SURTASS), a towed line array over 8,000 feet long. By means of satellite communication links, contact information developed by the SURTASS ships at sea was passed to the SOSUS Evaluation Centers ashore and melded with data from the fixed arrays to establish position estimates for likely targets. In time, the totality of fixed arrays, shore processing facilities, and SURTASS ships became known as the Integrated Undersea Surveillance System (IUSS).

Eventually, with the help of key information supplied by the Walker-Whitworth espionage ring, Soviet intelligence learned of the existence of SOSUS and its remarkable success in tracking Soviet submarines at long range. Thus, beginning shortly after John Walker's first treasonous revelations in 1968, the Russian navy embarked belatedly on a rapid submarine quieting program, and within five years, the radiated noise levels of their first-line boats had begun to drop precipitously. By the end of the Cold War in the late 1980s, Russian submarines were much closer to their US equivalents, and the ability of IUSS to detect and track them at long range had deteriorated significantly. In an attempt to regain some of the acoustic advantage lost to Soviet quieting, IUSS system developers turned from long line arrays and their fans of pre-formed beams to large fields of simpler, "upward-looking" hydrophones densely distributed on the ocean floor,

each capable of detecting submarines only in its immediate vicinity. Thus, detection and localization were subsumed into a single process, and the first “Fixed Distributed System” built in accordance with this strategy was deployed in 1985.

Moreover, with steady improvements in acoustic signal processing through the 1970s and 1980s, the first generation of shore-processing hardware, which turned out hundreds of single-beam LOFARgrams – 24 hours a day, every day – was gradually replaced by computer-based workstations that could analyze the incoming acoustic data digitally and display it on multiple computer screens. Additionally, to reduce manpower requirements and achieve other efficiencies, most of the original arrays were re-terminated at alternative shore sites or “remoted” to central processing facilities, which led to a steady reduction in the number of operational NAVFACs. These transitions were completed in 1997 and 1998, but by that time – ironically – quieter submarines, major changes in Soviet operating patterns, and finally, the end of the Cold War had already eliminated much of the justification for maintaining IUSS at its full capability.

Today, while the Navy maintains a number of SOSUS arrays in either operational or standby status, only three shore facilities at Dam Neck, Virginia, Whidbey Island, Washington, and St. Mawgan, United Kingdom – remain to process their dwindling output. With few possibly-hostile, nuclear-powered submarines still operating at sea and modern, quiet, diesel-electric boats essentially undetectable at long range by passive means, there’s not a lot to listen for anymore, and targets of potential interest are rare. However, several existing arrays have achieved well-publicized successes in peacetime pursuits such as tracking migrating whales and detecting illegal driftnet fishing on the high seas. Moreover, as the Navy explores the use of low-frequency active (LFA) acoustics for detecting and tracking quiet submarines in the future, both the fixed arrays and the remaining SURTASS ships may well play an important role as adjunct or bi-static receiving sites.

When it was first suggested over 50 years ago as a means of exploiting contemporary oceanographic findings and state-of-the-art technology for wide-area undersea surveillance, SOSUS was an audacious concept, and its successful implementation was one of the most impressive engineering feats of the early Cold War. Later, during the most dangerous phases of that simmering conflict, IUSS gave the United States an unprecedented capability for long-range submarine detection and strategic early warning that we can only envy today in this new era of asymmetric threats.

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There was a rumor on the Ham bands that the US had been dusting off some old cold war technology because of SSBNs. Back in the ‘60s, according to TOM, he’d gone TDY to OLF San Nicolas Island. Apparently his job was to work on the 3rd stage motor of a rocket engine applying strain gauges. This involved sanding flat spots of the motors’ titanium case.

There was nothing particularly secure on the Island and one night he and the Staff Sergeant he was with went to the site where they were downloading signals from Telstar. Another night they went to the radar station and got to see all the ships between the Island and coast on Radar. Yet another time they went to the fire station and TOM was introduced to Chile Relleños. There was one place on the Island that was Off Limits and it had the fence and barbed wire and gate guard. All of the people who worked in the facility were Sonarmen PO2 or above. The facility was the SOSUS station.

Did the Cold War really end or did it just change character? TOM says the latter is true. The lead flying around in Iraq and Afghanistan sure was hot, so maybe he has a point. Consider Russia and South Ossetia and Russia and the Crimea and Russia and the Ukraine. Lots to consider and you get to consider Russia each time. Was that new Borei-class as quiet as an Ohio-class? Noisier? Quieter? What if the rumor was planted specifically to get back at whoever launched on Beijing and Washington? You can't break wind anymore without NSA hearing you and probably getting a sniff. Was RP running a mind game on the Russian President? Whether he's President or the Foreign Minister, Vlad is the actual President. Since they have term limits, they trade off.

Rumor also has it that that old useless, outdated Internet will be back up in a few months. If Wikipedia is up, I'm going check out SOSUS. For the sake of argument, I'll assume the Borei-class is quieter than the Typhoon. The Borei-class is also larger than the Ohio-class or did I mention that before?

Judy and I spent 2 days restocking the pantry in the cabin and 2 more days listing what it would take to bring the STS back up to a full year. We decided when that was done we'd worry about refilling the freezer and replacing the LTS foods, if we could get them. When I saw her wearing her Hi-Power in a Monarch rig with 3 extra magazines and a Cold Steel FGX Boot Blade I, I was impressed. Her PT1911 was in a paddle holster with 2 CO-21V Double Pistol magazine pouches and the 590A1 had the sheathed bayonet on it. Not to be out done, I loaded my Super Match with along with 15 20 round magazines of Black Hills 175gr BTHP and the HK417 along with a dozen 40mm grenades and 21 magazines loaded with 168gr PPU. My PPK was in the ankle holster with the extra magazine and a double magazine pouch on my other ankle. I had a Gerber Multitool and an automatic knife. My Hi-Power was in an IWB holster with 2 CO-21V Double Pistol pouches. In our view, we were being prudent.

"Do you think we need hand grenades?"

"I'll grab some white smoke and OC grenades."

"Non-lethal?"

"Less-lethal. Even those Taser shotgun shells can kill a person."

"Are we going to hold the Wal-Marts up?"

“We’re going to protect our purchases if any.”

Both the Flippin Wal-Mart and the Mountain Home Wal-Mart are super stores. We started in Flippin, the more distant store. It was hit and miss, providing ~⅓ of the items on our list. The Mountain Home store had more stock and getting us to about ¾ of the items on our list. I filled our fuel tanks and headed home to unload and relist the remaining items in a shorter list. The store manager on duty at the Mountain Home store said deliveries were running about 1 truck every 4 or 5 days. Both were accepting cash and checks on local area banks. I heard someone discussing gold and the fact that the spot price was ‘about 2,000’.

I wanted to contact the coal company for more coal, the fuel distributor for more diesel and gasoline and the propane supplier to top the tanks off. I suggested we order the various fuels the following day along with seeing about another 20 cord firewood package. I added replacing the Everclear to the list, yet another ‘just in case’ measure. With everything dated and put away, we started to inventory the LTS foods.

The following day, we finished the inventory of the remaining LTS foods and determined a single order from Emergency Essentials ought to be enough. The next day we laid out the garden and rototilled it with one pass. After watering it down, we’d leave it for a second pass the following week, incorporating the fertilizer.

Every other day we’d check with the Mountain Home Wal-Mart about their expected delivery. Theirs was due the next day since Flippin got theirs today. We thanked him and headed for Flippin. We came away missing only a very few items and agreed to return to Mountain Home the following day to finish replenishing our STS.

“Do you feel like driving to Orem?”

“That’s a long drive; I’ve done it before.”

“I can accept that Rollin. Do you have a better idea how to get the LTS foods?”

“Not really. Day after tomorrow?”

“Yes. We can’t go tomorrow because we have to go to Wal-Mart to finish resupplying the STS.”

“It’s over 1,300 miles so we should figure on 2 days up and 2 days back plus the time to get the order. Nitro-Pak isn’t that farm from Orem. Maybe we should go to Heber too.”

“If we’re going that far, maybe we should go to Hyrum and Montpelier.”

“So long as we limit ourselves to those 6 gallon pails, I don’t have a problem with Montpelier. What do you want from Canning Pantry?”

“A better flaker than the one you got and a powered Country Living Grain Mill.”

“The Diamant 525 is supposed to be the best on the market?”

“Have you used it?”

“No.”

“It is a good mill and I’ve found if you run the grain through 2 passes you get nice consistent flour. However it clogs when you use oily grains. I’m perfectly willing to buy the new powered mill.”

“That won’t be necessary. I wonder what became of Steve and Melody.”

“Do you want to drive up to Mountain Home and check with law enforcement?”

“Actually, that sounds like a good idea. You ready to go?”

“You were friends for a long time, I take it. Maybe they made it despite the radiation level being so high.”

The Mountain Home Police had no record and referred us to the Baxter County Sheriff. A deputy went down the list of identified bodies recovered and found Steve’s name. It also indicated that he was accompanied by Melody.

“There was a sealed envelope found addressed to ‘Smoke’.”

“That would be me. My full name is Rollin James Reynolds and since my first hitch in the Army, they tagged me with Smoke or Smokey.”

I opened the envelope and read the letter. In a shaky hand, Steve said we had been right and they should have sought shelter. By the time they were done with their drinking binge, they had way too much radiation and their hair was falling out, they had bloody gums, etc. Everything was in the service body of his truck and he was leaving me the truck. I handed the letter to Judy and she read it.

“Deputy, the letter says he left me his truck.”

“It’s in the impound yard. Let me see the letter. If you can identify the truck, I guess it’s yours. We just don’t have time to deal with things like this in the ‘normal’ way.”

“That’s it right there.”

“Yes, that’s the vehicle impounded from the location where we found the bodies. Come inside and I’ll have you sign the release form.”

Maybe they were a little lax, but we'd just had WW III. Judy drove my pickup and I drove Steve's back to the property. The first thing we did was unload the firearms and ammunition and get them into the shelter. She fixed supper while I cleaned the rifles, shotgun and handguns.

"Well, we basically have 3 of everything if you lump the Tac-50s and Tac-338 together."

"Are we still on to go to Wal-Mart tomorrow and north the following day?"

"If I can rent a Ryder truck like I did the last time, yes."

World War Three – Chapter 11

The rental was gasoline fueled and we went hunting for 55 gallon drums. Nine drums would hold most the gasoline and we couldn't count on being able to buy gas on the trip. If we could buy gas for a reasonable price, so much the better; we took some PRI-G. The decision was to go with our pistols on us and the rifles, excluding the HK416s, in the back of the truck.

Our route for this trip depended upon which cities had been hit. Based on what we were hearing on the Ham bands, most of the strikes had been counter-force. If a major city was near a counter-force target, so much the better. Apparently the only counter-value target hit as a counter-value target was New York, NY. Were they home or vacationing in Hawaii?

We had cash and a substantial amount of gold and silver with us since one never knew what the suppliers would want. After driving from dawn to well past dusk, we were only ⅓ of the way on our journey, due to detours. We located a motel and this one wanted cash on the barrelhead. We went to our room, heated water for 2 Mountain House meals, showered and fell into bed.

The next 2 days went much the same and we arrived in Orem late in the evening. This motel wanted silver and I forked over the amount of silver it took. Emergency Essentials was open, the food wasn't on sale and it was gold or silver only. We decided to skip Nitro-Pak because we were able to buy 10 years' worth of the 2000 Gourmet packages for one.

Our next stop was Hyrum and we got the motorized grinder, accessories and spare parts along with other items on Judy's list. Up in Montpelier, we bought 10 Basic 1 Year Unit - UU025 which had 13 pails per unit and 2 boxes of miscellaneous products. From Montpelier, we cut US 30 down to I-80 and made it back to Mountain Home in 2 very long days. It took most of the next day to unload the truck into the cabin, empty the drums containing gas, and turn in the truck. I had taken a few minutes to make crock pot chili before we started unloading. When we got home, Judy used a package of Jiffy corn bread mix for a small pan of cornbread.

We showered, collapsed into bed and cuddled.

"Is that all going to fit in the shelter storeroom?"

"I don't think so. I think we'd better store the Walton stuff in the shelter's second bedroom. We should be sure to date everything when we put it away and rotate the stocks as much as possible."

"You'll have to get the pails Rollin; they're too heavy for me."

"That's fine Judy, but I'm not going to kill myself hauling everything downstairs."

Considering what we'd used up in the shelter stay, we now had about 1 year STS for 2 and 20 years LTS for 2. That didn't include the beef, pork and poultry products we would be purchasing to restock the freezer. We took our time moving everything to the shelter. The next week we went into town to see about the meat products. About the best we could do was a side of beef, a hog and a box of whole chickens on ice. We hit both Wal-Marts for bacon, sausage, butter and coffee. Shortening wasn't available but they had lard so we bought that. We also stopped by the locker plant and asked them to include the leaf fat for rendering. They said they could render the fat for so much per pound and Judy told them to go ahead.

Today, vegetable oils such as soybean, corn, safflower, sunflower, or cottonseed oil-or "polyunsaturated fats"-are commonly used to replace trans fats. But when heated to temperatures required for frying food, these highly unstable oils can create oxidation products that are extremely toxic. From The Big Fat Surprise: *Why Butter, Meat & Cheese Belong in a Healthy Diet.*

For more than sixty years, Americans have been told to eat polyunsaturated vegetable oils instead of saturated fats. This advice has been based on the simple reality that vegetable oils lower total cholesterol (and LDL cholesterol, too, as later discovered). The fact that vegetable oils also create toxic oxidation products when heated and trigger inflammatory effects linked to heart disease, are, it seems, less important to mainstream nutrition experts, whose focus hasn't wavered from cholesterol. Most Americans don't realize that their nutritional advice is based on such a narrow set of health concerns, nor that large edible-oil companies have been contributing funds to their trusted, guiding institutions, such as the AHA, as well as to schools of medicine and public health. And while the scientists at large food manufacturers might understand the problems of unsaturated oils, they have not had alternatives to work with, due to the prevailing stigma against saturated fats. Everyone has therefore gotten on board with the advice to use vegetable oils in both the home and industrial kitchens alike.

Our consumption has moved from saturated fats at the beginning of the twentieth century to partially hydrogenated oils to polyunsaturated oils. We have therefore unwittingly been subject to a chain of events starting with the elimination of animal fats and eventually winding up with aldehydes in our food. Looking ahead, it is little consolation that the FDA is poised to ban trans fats entirely, which will make liquid oils and their oxidation products even more common. Mom-and-pop restaurants, local cafeterias, and corner bakeries will then follow in the footsteps of the large fast-food restaurants in eliminating trans fats but will be less likely to employ rigorous oil-changing and ventilation standards into their operations. Despite the original good intentions behind getting rid of saturated fats, and the subsequent good intentions behind getting rid of trans fats, it seems that the reality, in terms of our health, has been that we've been repeatedly jumping from the frying pan into the fire.

The solution may be to return to stable, solid animal fats, like lard and butter, which don't contain any mystery isomers or clog up cell membranes, as trans fats do, and

don't oxidize, as do liquid oils. Saturated fats, which also raise HDL-cholesterol, start to look like a rather good alternative from this perspective. If only saturated fats didn't also raise LDL, the "bad" cholesterol, which remains the key piece of evidence against them. But like so many of the scientific "truths" that we believe but which, upon examination, start to crumble, maybe the LDL-raising effect isn't quite an incontrovertible certainty, either.

The NWS EAS SAME radio activated and we were told to standby for an announcement by the President.

My fellow Americans,

As I stated on January 20th, when we determined with a reasonable degree of certainty who was responsible for the attack on our nation's capital, I would ask Congress to declare that a state of war exists between our two countries.

China is no longer an issue having been attacked by the Japanese which destroyed the Three Gorges Dam and wiping out everything between it and Shanghai. This country followed suit by launching 154 Tomahawk Land Attack Missiles – Nuclear, and destroying 150 Chinese targets.

China retaliated with their land based ICBMs and attempted to launch their SLBMs. Fortunately our attack submarines followed the SSBNs from China to their apparent launch locations and sank 3 of the 5. The only intentional city to be struck was New York City. A strike directed against the Air Matériel Command at Tinker AFB devastated Oklahoma City.

Due to efforts by the first Bush Administration, the Clinton Administration, the second Bush Administration and the Obama Administration, our underwater listening system, SOSUS with several existing arrays have achieved well-publicized successes in peacetime pursuits such as tracking migrating whales and detecting illegal driftnet fishing on the high seas. Moreover, as the Navy explores the use of low-frequency active (LFA) acoustics for detecting and tracking quiet submarines in the future, both the fixed arrays and the remaining SURTASS ships may well play an important role as adjunct or bistatic receiving sites.

We have analyzed the data from those resources and can say with a certainty who attacked Washington and Beijing. We've had enough of war and only want peace. Therefore if the leaders of that country contact the leadership of this country with reasonable offers of reparations, we will entertain those offers. If they have not contacted us within 96 hours, a state of war will exist between our nations and we will use any and all means to prevail.

I pray that nation comes forward timely. Goodnight and God Bless America.

"Well?"

“Flip a coin, Judy. I give it 50-50 odds.”

“Did he suggest who I think he was suggesting?”

“If you were thinking Russia, it would be my guess too. They have a massive shelter system as part of their Metro. They no doubt have satellites that observe us much as we observe them. If this Administration was smart, they would have been rearming the SSBNs in the light of day. RP is no fool and I’d bet dollars to donuts that he directed that strategy. He’s hard core Tea Party, sort of like a latter-day Ronald Reagan. Since he admitted they used TLAM-Ns, I suppose the SSGNs will be rearmed with the same to the extent we have the missiles and warheads.”

“Any idea how many?”

“Rough guess, 200 or so. They have a lot more W80-1 warheads for the ALCMs that the Air Force uses, perhaps as many as 1,400. According to the Nuclear Archives the US only had 100 W80-0 warheads active and 197 inactive. They obviously dusted off some of the inactive which would explain 4 failures.”

“Could they substitute?”

“I looked at a picture at the Nuclear Weapons Archive and while the interiors were the same, the exteriors were slightly different. I honestly don’t know. If they told some Chief Machinist’s Mate he couldn’t do it, he’d probably say ‘watch me’.”

“I think I agree with the President, *We’ve had enough of war and only want peace*.”

“We’ll know for sure in 96 hours.”

It was worse than waiting for radiation to arrive. We did manage to get the gas tank re-filled and stabilized along with filling the diesel tank with 500 gallons of biodiesel. The propane tank was a different matter. Neither AmeriGas nor Ferrellgas would deliver more than 3,000 gallons so I scheduled one for the next day and one for the day after. We need ~6,000 gallons anyway. We ended up full and they accepted cash.

We were able to pick up the beef, pork and poultry because they swapped us cured hams and bacon. We got Hormel hams and more coffee from the 2 Wal-Marts. We used about 2 rolls of bath tissue a week, on average. There are 30 rolls to the bundle which translated into 3½ bundles per year and I had 50+ bundles of Ultra Charmin (cute bear), a 15 year supply. We also had a lot of Puffs because Judy didn’t like Kleenex. On the other hand, I didn’t throw away the Kleenex since it could substitute for Puffs and bath tissue.

Halfway into the 96 hour countdown, I started moving the pantry contents to the shelter, timing it so I’d be done about an hour before the deadline was up. This would give us

time to move the contents of the refrigerator/freezer to shelter before the countdown ended.

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“You have a Virginia-class on each Borei-class?”

“Yes, sir.”

“I want their tubes filled, and torpedo tubes opened ready to fire one minute after the deadline is up. They will fire unless ordered not to.”

“Mr. President, that’s pretty risky.”

“Yep.”

“Yes, sir.

“Next subject, the ICBMs. Those will be on a one minute alert but will not fire until the SECDEF and I give out the codes. Finally, the SSBNs will be on a 6 hour hold and will release their missiles unless we issue a stand down. The majority of our weapon systems will presumptive mode to launch.”

“Yes, sir.”

°

At $6 billion a pop the Seawolf-class was intended to replace the Los Angeles class. The Seawolf-class is a class of nuclear-powered fast attack submarines (SSN) in service with the United States Navy. Design work began in 1983. At one time, an intended fleet of 29 submarines was to be built over a ten-year period, later reduced to twelve submarines. The end of the Cold War and budget constraints led to the cancellation in 1995 of any further additions to the fleet, leaving the Seawolf class limited to just three boats. This, in turn, led to the design of the smaller Virginia class.

Designed to be the world’s quietest submarine, Seawolf is reportedly less detectable at high speed than a Los Angeles-class submarine at the pier. Advanced weaponry and new tactical capabilities and communications, combined with an increased weapons load of Mk 48 ADCAP torpedoes, and Tomahawk cruise missiles, allow Seawolf to operate from under arctic ice to shallow water close to shore. A special addition, CDR Howard noted, was the computer-driven autopilot helm, which keeps the ship maintained at a level depth “in some cases better than the helmsman can. This thing is a Ferrari.”

After a period of post-construction testing, additional modifications, and depot level repairs, Seawolf departed in June on her first deployment. She sailed with a relatively in-

experienced crew - 11 of her 14 officers and 65 percent of the enlisted Sailors would deploy for the first time in their careers on what would prove to be a multi-theater and multi-mission assignment.

Pre-deployment workups for Seawolf prepared the ship for independent operations in the North Atlantic to test the crew's ability to use multiple sensors and to train on the tasks of undersea and surface warfare and intelligence gathering. The plan for the second half of the deployment, although unknown at the time of departure, was to support carrier battle group operations in the Mediterranean Sea. This turned out to be a unique and exciting opportunity. The ship would need to adjust to a tactical and philosophical approach quite different from that of independent operations, and even the skipper confessed his own lack of battle group experience. But events across the Atlantic Ocean scuttled those plans.

The terrorist attacks of 11 September forced an early underway from a planned upkeep in Faslane, Scotland and accelerated the submarine's passage through the Straits of Gibraltar into the Mediterranean Sea. Because of the nature of submarine operations, "we had extremely limited access to events in real time and actually wouldn't hear much of the details until days later – and we would not see any news coverage for weeks," CDR Howard said. Crew emotions, he added, "were all over the map. Our country had been attacked, yet we were in a great position to do something about it. We were able to get word quickly that our families and friends, many of them New Yorkers and many of them working in the Pentagon, had avoided the terrible attack. Trust me, it did not take much to get the crew excited about going back to sea again."

The ship sortied from Scotland, moved halfway back to the East Coast to await the arrival of the USS Theodore Roosevelt battle group, and earned a certification to conduct strike operations. Soon after, urgent orders sent the submarine directly to the Mediterranean to increase the number of Tomahawks and launch platforms in the theater of operations.

"There is no other submarine in the Navy, and few surface ships, for that matter, that can cover as many miles as we did in the limited time it took," CDR Howard said. "We went halfway across the Atlantic in about 48 hours," even as Seawolf maintained robust battle group communications and ran propulsion-limiting casualty drills.

As Seawolf waited for potential orders for Operation Enduring Freedom, while additionally providing support to the Theodore Roosevelt Battle Group, she played a role in her first NATO exercise, Destined Glory 2001. The ship enjoyed a chance to test its stealth abilities against a NATO force diesel submarine, closing to extremely close range before Seawolf "lit her up with active sonar to make the most of the training period." The submarine also got valuable contact-management team training at Gibraltar, with at least 30 additional warships adding to the tight traffic in the busy doorway to the Mediterranean.

Seawolf later met up for the first time with the submarine tender *USS Emory S. Land,* AS-39, in La Maddalena, Italy, to trade some of the submarine's torpedo payload for cruise missiles, take on another 60 days' worth of food, and conduct minor voyage repairs. Then she set off to use her exceptional stealth and agility in support of the war on terrorism.

CDR Howard was proud of the fact that despite her new design, Seawolf sent out fewer casualty reports for material failures during 2001 than "the average boat on the waterfront." The skipper explained that the ship makes maximum use of commercial-off-the-shelf (COTS) equipment, a key principle of the Submarine Force's modernization plan, and that the few material problems discovered during this deployment would help determine maintenance and spare-part requirements for future operations of his ship and the other two Seawolf-class submarines. The true impact of the cruise, the Seawolf CO said, is how the ship "delivered on the Submarine Force's new message of plug-and-fight, multi-mission capability," including independent and battle group operations in two global theaters.

Seawolf's skipper told the audience that one side effect of having a small class of submarines was insufficient pre-deployment logistical support; Seawolf's crew and the New London repair activities spent thousands of man-hours in planning for the potential need of critical parts to meet the deployment schedule. CDR Howard said he was told if he could simply keep the ship away from its Groton homeport for six months without returning for more repairs, the deployment would be considered a success, "no matter what we did tactically," he said. "We did that and more, and the outstanding material condition of the ship throughout the deployment was largely due to the supreme efforts of the New London waterfront."

The Virginia-class was quieter than the Seawolf-class and less expensive. As construction continued, the price in constant 1995 dollars continued to fall and the boats were improved. If the Seawolf was quieter than a Los Angeles-class at the pier, the Virginia-class might be quieter than the Seawolf at pier.

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Ring… and the light flashed on the phone…

"Ah, Mr. President, I was waiting for your call. Excuse me while I get a sip of water. Put everything on hold it's Putin. Have you come to a decision? I see. Well, the amount isn't really negotiable, but I believe we can come to terms, say a sort of payment plan. Well, you know, you extract gold and diamonds from those mines. No, I don't believe we even considered asking for any portion of your gas revenues. This thing with the Ukraine needs to be worked out, we let you keep the Crimea and you let Ukraine remain independent.

"Well, look at it this way, there are the same numbers of members to the nuclear club and Tokyo is further from Moscow than Beijing. Yes, I've given instructions for the Vir-

ginia subs to back off; actually I'm surprised you heard them. Oh, I see, you didn't hear them you just assumed they were there with all 4 torpedo tubes open. Good guess, they were about 90 seconds from firing. Yes, orders have been issued to the SSNs, SSBNs and SSGNs to stand down along with the Minuteman missiles.

"Well to tell you the truth, the only reason I won the election was because of the bad taste Obama left in the mouths of most Americans. No, I don't recall meeting Reagan but Dad did, several times. We're at full stand down but we can go from DEFCON 4 to 1 in the blink of an eye. Yes, I think it would be a good idea for you to come to the US. How about Holloman AFB?

"Oh, I assumed you knew that's the bunker nobody talks about. That's why the Mountain is the best choice. I'll have our Secretary of State contact your Foreign Minister. No, thank you very much Mr. President.

"Knock them down to DEFCON 3 for 24 hours and if the situation is stable, DEFCON 4 for 72 hours and then DEFCON 5 if things are back to normal. Oh, and get those Carrier Strike Groups and other ships and boats back to their homeports."

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We were just start to drag the blast door closed when the NWS EAS SAME radio activated and we were told to standby for an announcement by the President.

My fellow Americans,

I can't believe it but I believe I just won just one for the Gipper. We received a call on the hotline moments ago and the responsible party for the attack on Washington agreed to make restitution. I serious doubt that we've ever been seconds away from DEFCON 1, but avoided it at the last moment. We are at DEFCON 3 and will go to DEFCON 4 in 24 hours with DEFCON 5 to follow that in 72 hours.

I have ordered all Carrier Strike Groups to return to their homeports as well as the submarines not on patrol.

God Bless us all.

"Is it alright if I wait until tomorrow to haul everything back upstairs?"

"Why don't we just finish closing the blast door and go to bed?"

"I can do that by myself Judy. A cup of hot chocolate would be nice. There's an open pail of that in the storeroom with the lid just sitting on the top. Use that yellow measuring cup in the cabinet and use one measure per 8 ounces of water."

World War Three – Chapter 12

Earlier, the other trouble spot, the Middle East, was brought up and the intentions of the people to form a new Muslim Empire. Iran was at odds with the world over their nuclear program and whether it was for peaceful purposes, as they claimed, or a cover for developing nuclear weapons, which much of the balance of the world believed.

As we learned earlier, Japan had managed to successfully develop nuclear weapons. They tested 2 and used 1, all with yields of approximately 1mT. They also had missiles to deliver the weapons on target, accurately. The initial speculation was that 3 countries were likely candidates for the first test in the southern Indian Ocean, Iran, Japan and Germany. When the second test proved that it was Japan, those who knew sat on the information.

It seemed that in the Middle East, the approach to form the Muslim Empire was taking a different approach, called 'Arab Spring'. Arab Spring began on December 18, 2010 in Tunisia. Algeria, Jordan, Oman, Egypt, Yemen, Djibouti, Somalia, Sudan*, Iraq*, Bahrain*, Libya, Kuwait, Morocco, Mauritania, Lebanon, Saudi Arabia, Syria*, Israel and Palestine followed in chronological order with the countries designated with an *, ongoing into 2014.

The enlightened governments were able to end their uprisings in periods as short as a single day with concessions that satisfied their populations. Four hadn't. Sudan, Iraq, Bahrain and Syria. One had to realize the situation had taken a step towards the precipice when Iran offered to help the United States resolve the situation in Iraq. Iran is Shi'ite; the majority in Iraq is Shi'ite; and the insurgents in Iraq were Sunni. The previous war between Iraq and Iran lasted 8 years… about as long as Iraqi Freedom.

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Operation Enduring Freedom, Afghanistan, was going to Hell in a handcart in mid-2014 because the US refused to pull the troops. Was that because the US failed to recognize the similarities between the Viet Cong and the Taliban? I'm just asking because... *Those who cannot remember the past are condemned to repeat it.*

°

When the situation in the Far East became intense, many stopped following the events in the Middle East, a major mistake. I was just as guilty as the next person.

During late 2013 and early 2014 Yellowstone began a period of increased activity and the government we all hated clamped a lid on the reporting of the event by the USGS and every other outlet. They waited and watched because the situation in Far East was demanding most of their attention. I routinely checked all 5 Volcano Observatories and YVO wasn't carrying their usual coverage. Strange, but nothing to write home about as the expression goes.

YELLOWSTONE VOLCANO OBSERVATORY INFORMATION STATEMENT

Tuesday, February 18, 2014 9:31 AM MST (Tuesday, February 18, 2014 16:31 UTC)

YELLOWSTONE VOLCANO (VNUM #325010)
44°25'48" N 110°40'12" W, Summit Elevation 9203 ft (2805 m)
Current Volcano Alert Level: NORMAL
Current Aviation Color Code: GREEN

Since late summer 2013, the Yellowstone GPS network has tracked a small ground deformation episode in north-central Yellowstone National Park. During the past five months, the NRWY GPS station has recorded about 3.5 cm (1.4 in) of uplift and about 1 cm (0.4 in) of southeastward ground movement, relative to a stable reference station north of the Park. Measurements from other GPS stations in northern Yellowstone show smaller displacements, forming a circular pattern of deformation consistent with a minor pressurization, about 6 to 10 km (4-6 miles) deep, near Norris Junction.

Similar patterns of ground deformation have occurred before in this part of Yellowstone. From 1996 through 2003 the Norris Geyser Basin rose about 12 cm, before beginning to subside in 2004. More information about this event is available at http://volcanoes.usgs.gov/volcanoes/yellowstone/yellowstone_monitoring_51.html.

Episodes of ground deformation, which occur commonly in Yellowstone and at other dormant volcanoes around the world, pose no direct volcanic hazards, nor do they imply that an eruption is pending. They do, however, create a scientific opportunity to better understand the geologic processes at work in Yellowstone and elsewhere. YVO and other scientists are pursuing this opportunity, and will continue to monitor the ground deformation closely.

UNAVCO, a YVO member agency, operates the Yellowstone GPS network.

The Yellowstone Volcano Observatory (YVO) provides long-term monitoring of volcanic and earthquake activity in the Yellowstone National Park region. Yellowstone is the site of the largest and most diverse collection of natural thermal features in the world and the first National Park. YVO is one of the five USGS Volcano Observatories that monitor volcanoes within the United States for science and public safety.

YVO Member agencies: USGS, Yellowstone National Park, University of Utah, University of Wyoming, UNAVCO, Inc., Wyoming State Geological Survey, Montana Bureau of Mines and Geology, Idaho Geological Survey

We added a few more STS, mostly staples, and didn't give it much thought. The buildup on the war got most of our attention. I still checked YVO and became slightly concerned

at the lack of news. If it was going to erupt, it was going to erupt and there was nothing we could do about it.

FAQ about Recent News Reports - Earthquake, Ground Uplift, Animal Movement, and Helium

April 02, 2014
Recent weeks have seen a flurry of news, real and imagined, about the Yellowstone volcanic system. Below is a brief FAQ about several topics that have appeared in recent news reports.

Has earthquake activity at Yellowstone increased dramatically over the last month?

With the latest swarms, earthquakes are elevated, but are not unusual for Yellowstone. The previous uptick in earthquakes in this part of the park was during the previous period of uplift in this region.

Is the recent episode of ground deformation worrisome?

No. Current rates of ground deformation are well within historical norms. Please see our February 18, 2014 Information Statement, for more information about ground deformation at Yellowstone.

Are animals leaving Yellowstone National Park?

According to the park, any animal migrations are typical for this time of year. Most of the recent videos on the internet that show running bison were filmed weeks (at least) before Sunday's earthquake. Park spokesman Al Nash discusses this and other topics in a YouTube video.

Do helium emissions at Yellowstone signal an impending eruption?

No. YVO Scientist-in-Charge Jacob Lowenstern and colleagues recently published research on helium (He) emissions at Yellowstone in the journal Nature. The new research looked at apparent changes in the helium output of the Yellowstone area during its two-million-year volcanic history, compared with the previous two billion years of comparative stability. The research has nothing to do with current activity at Yellowstone, and has no implications about volcanic hazards. For a humorous and informative take on the new research, read the Los Angeles Times article, "It's up, up and away for ancient trapped helium at Yellowstone," or watch the Slate.com video "Ancient Helium Is Escaping by the Ton from Yellowstone."

For additional information, see the April 1, 2014 Monthly Activity Update.

Tuesday, April 1, 2014 11:57 AM MDT (Tuesday, April 1, 2014 17:57 UTC)

YELLOWSTONE VOLCANO (VNUM #325010)
44°25'48" N 110°40'12" W, Summit Elevation 9203 ft (2805 m)
Current Volcano Alert Level: NORMAL
Current Aviation Color Code: GREEN

Seismicity

During March 2014, the University of Utah reports 277 earthquakes were located in the Yellowstone National Park region. More events will be added as the University of Utah Seismograph Stations, responsible for the operation and analysis of the Yellowstone Seismic Network, processes the remaining March events. The largest event was a light earthquake of magnitude 4.7 on March 30, at 06:34 AM MDT, located four miles north-northeast of Norris Geyser Basin in Yellowstone National Park, Wyoming. The M4.7 main shock was reported felt in Yellowstone National Park, in the towns of Gardiner and West Yellowstone, Montana and throughout the region. This is the largest earthquake at Yellowstone since the early 1980s. Initial source analysis of the M4.7 earthquake suggests a tectonic origin (mostly strike-slip motion).

March 2014 seismicity was dominated by two earthquake clusters in the Norris Geyser Basin region and are described below.

1) A north-south trending series of earthquakes, over seven miles in length, began in September, 2013 and persisted throughout March with 130 events. The largest earthquake (magnitude 3.5) occurred on March 26, at 05:59 PM MDT, located 13 miles south-southwest of Mammoth, WY.

2) The earthquake series containing the March 30 magnitude 4.7 event began on March 27 and continues into April. At the end of March the series consisted of 70 located earthquakes, including the largest earthquake of the month, four magnitude 3 earthquakes, and numerous magnitude 2 and smaller earthquakes.

Earthquake sequences like these are common and account for roughly 50% of the total seismicity in the Yellowstone region.

Yellowstone earthquake activity in March is elevated compared with typical background levels.

Ground deformation

The ground deformation occurring in north-central Yellowstone continues. Since August 1, 2013, the NRWY GPS station has moved about 1.5 cm east, 2 cm north, and 5.5 cm up.

Further south, the caldera subsidence, which began in 2010, has ceased. Since the beginning of 2014, the caldera has been slowly rising at a rate of about 2 cm/yr. All the deformation currently occurring in Yellowstone remains well within historical norms.

The Yellowstone GPS network recorded no deformation associated with the March 30, 2014 M4.7 earthquake. Earthquakes of this size and depth do not typically produce ground displacements large enough to detect with GPS.

Other

The GPS field crew at Yellowstone has traveled around the Park over the past week and has not observed any effects from the earthquake. If any subtle changes have occurred, they are most likely to be found after the snow melts.

YVO's real time temperature data in Norris Geyser Basin indicate no significant changes to the thermal features that are monitored.
(http://volcanoes.usgs.gov/volcanoes/yellowstone/yellowstone_monitoring_32.html)

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YVO Member agencies: USGS, Yellowstone National Park, University of Utah, University of Wyoming, UNAVCO, Inc., Wyoming State Geological Survey, Montana Bureau of Mines and Geology, Idaho Geological Survey

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We were sound asleep when Yellowstone erupted. We received a small amount of shaking after it let loose. The Long Valley Caldera let loose shortly after Yellowstone. The Cascade Range erupted. Half of Alaska erupted. Cascadia had subducted beginning the chain of events and the San Andreas and New Madrid let loose. Millions of cubic meters of ash were tossed to the heavens and I almost ended up on my butt on the carpeted floor of the shelter bedroom.

"What was that Rollin?"

"I don't know, maybe the New Madrid."

"I'd better get dressed."

"I'm dog tired but I guess I'd better get dressed too."

“If that was New Madrid, it had to be a big one.”

“Probably a 6-7 something.”

“I’ll put on coffee.”

“We’re on battery power and the state of charge is 99.7%. I’m going to throw the manual grid tie switch to off.”

As I made my way to the generator room, we got our first after shock and I quit counting at 100. When it stopped shaking, I got the switch flipped and returned to the shelter main room. Judy was on the floor and the filled pot of water was in the sink. I helped her up and checked the basket to see if she had added fresh grounds. She had so I added the water, put the pot under the basket and got out the wire bail I’d fashioned to hold the pot under the basket.

“You anticipated an earthquake?”

“That’s why I didn’t settle in Jonesboro. It’s just a wire loop to hold the pot in place if it shakes again. Let’s see if we can get anything on the Ham radio.”

“Hadn’t we better check to see if the Tower is still up?”

“I suppose, it’s better to be safe than sorry.”

“Ok.”

“Ok, give me a hand with the door.”

“What will we do if we can’t get it open?”

“Use the emergency exit. That ladder in the bedroom goes up towards the cabin floor to access a blast hatch that comes out at ground level,”

The Tower was fine and we returned to the shelter and locked down. I took the radios out of the Faraday cage and hooked them up. The Kenwood had a separate Kenwood power supply. I set up the Business Band first, the Galaxy second and then the Kenwood. Then I added the NWS EAS SAME radio, clipping the antenna to the long wire with the alligator clip and Judy set up her AOR USA AR-5001D-U Unblocked ‘Government Version Only’ 40Khz-3.15GHZ Receiver connecting it to the AOR DA3200 25MHz-3000MHz, receive only wideband discone and AOR SA7000 30kHz-2000MHz receive only whip antenna we had mounted when she moved in. Static and more static, giving us no clue as to what had happened other than the likelihood that the New Madrid Seismic Zone had let loose.

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“Why wasn’t I told about this?”

“The potential eruption? The reason was because of the concern regarding a potential World War Three and no one in any position of authority being allowed to hear from the geologists.”

“Do we have any satellite views of the US?”

“We moved a satellite in position, there was nothing to see because of apparent ash in the atmosphere.”

“What about these earthquakes we’ve experienced?”

“The consensus of opinion is that the Cascadia subduction sent massive energy through the mantle causing volcanic eruptions and earthquakes on several faults. So far we have confirmed the New Madrid Seismic Zone and the San Andreas Fault letting loose. Some of the volcanoes in the Cascade Range have also erupted due to Cascadia subducting and two of Supervolcanoes have erupted.”

“What about La Palma?”

“We simply don’t know.”

“So, that’s moot. The military?”

“Most of the Chinese strikes were counter-force and at the moment the largest branches of the military are the US Navy and State Army National Guard units.”

“And they haven’t reached their home ports yet.”

“Exactly. Plus it is problematic calling up the Guard.”

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Right about now, I’d be willing to bet that he wished he’d recertified as an ophthalmologist and never entered politics. His batting average was very low. If one counted who was least damaged by WW III, it was probably the US. Japan had taken a few nukes but they did take out the Three Gorges Dam. The US had only received 1 counter-value strike and 1 combined counter-force/counter-value strike with the remainder being primarily counter-force. Washington didn’t count since it was a hit by Russia. If it did count, it was definitely counter-value.

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Improvise: Take your hollow handled knife and remove the cap and survival pack. Find a nice straight stick, preferably ash, and use the knife to cut it down. Then, using the knife cut one of the ends down so it will fit in the handle. Finally, use some of the para cord in your back pocket to hold the knife in place on the stick and you have – a spear.

Adapt: The HK416 works better with M855 ammo but if all you have is M193, use it.

Overcome: Where is it written that you can't stab/shoot your adversary in the back? See Improvise and Adapt.

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"Here we go again. Damn I'm glad I didn't settle in Jonesboro."

"Don't cuss please?"

"Sorry."

"Is there anything we should do?"

"Now that you mention it, I should make sure the emergency exit from the shelter is clear. If it's not, I should rectify that problem immediately."

"I'm coming with you so I can see where it is."

"Grab a coat and your… shotgun."

"Bayonet?"

"If it's fixed, sure."

We were wearing headlamps because of the dark. Took a few pails of coal in and set them next to the Ben Franklin. It wasn't actually a Franklin stove in design. The 'stove' Franklin invented was a metal-lined fireplace named after its inventor, Benjamin Franklin. It was invented in 1741. It had a hollow baffle near the rear (to transfer more heat from the fire to a room's air) and relied on an "inverted siphon" to draw the fire's hot fumes around the baffle. It was intended to produce more heat and less smoke than an ordinary open fireplace. It is also known as a "circulating stove" or the "Pennsylvania fireplace".

Our stove was a multi-fuel stove capable of burning multiple fuels, wood and coal. The appliance consisted of a solid metal closed on back and three sides fire chamber, a grate instead of fire brick on the bottom and an adjustable air control. The appliance was connected by ventilating stove pipes to the chimney, which filled with hot combustion gases once the fuel was ignited. Many wood-burning stoves are engineered such that they can be converted to multi-fuel stoves with the addition of a grate as was ours.

We finished up and returned to the shelter. We occupied our time buttoned up in the shelter.

“I bought in enough coal last night for about 3 days, just in case.”

“I wonder why Justin never married Dorinda.”

“You’ve read Jerry?”

“I’ve got his CD; TOM’s CD and downloaded all the new stories posted.”

“I’ve got some of the old stories from Frugal’s archive. I’ve got TOM’s CD but Jerry’s was sold out. I know he posted them on Kindle, but, a buck apiece was too much. I think I have most of his stories because I downloaded them from his website.”

“You know Rollin, if they used the same publisher; they probably have the same ‘extra’ files. I’ll have to check that.”

I wasn’t completely accurate when I said I didn’t download any Kindle files. I did download The Contract and Expedition and ordered Shipwrecked and Mr. Man but was that Kindle or directly from Jerry’s website? Right it was from his website because I figured he got more money selling directly. What do people think about in times like these? I’ll bet, *are we going to die* tops the list. Everyone dies, eventually, leading to the correct answer being *yes, eventually*. Is this an *E.L.E.*? *For the population of the country close to the Supervolcanoes, no doubt about.* [Everyone learned the term **E**xtinction **L**evel **E**vent from the movie *Deep Impact*.]

The nuclear strikes against China could have possibly killed up to hundreds of millions of their population and the volcanic activity, if that’s what happened, killed tens-hundreds of millions more. What do we do now? We live life one day at time for long as we have. The event is over, done with, so all we can do is cope.

On the practical side the PV panels wouldn’t produce much electricity and the Wind Turbine might have to be braked and locked down to protect the bearings. When daylight came, we covered the PV panels with tarps and locked down the Wind Turbine. That left us with the 30kw generator to recharge the batteries and ~60,000 gallons of propane to fuel the generator. Since I’m not an engine mechanic, who is going to rebuild the generator or repair the alternator?

The thoughts rushed through my brain in staccato fashion, overlapping, with each thought pushed away with the next. I gave up and got a bottle of chill pills and hoped it wasn’t expired. When Judy saw me with the bottle in my hand, she asked, “What are those?”

“Chill pills, anti-anxiety medication.”

“Give me one too.”

“I don’t know what’s going to happen next Judy, so we’d better plan on staying in the shelter.”

“I suspected as much and started a meal down here.”

“What are we having?”

“Crock pot chili and yeast biscuits from the freezer. I just put them in the oven and the chili is ready. What kind of liquor is in the medical cabinet?”

“Did you take the chill pill yet?”

“No, why?”

“The pill is a benzodiazepine and it’s synergistic with sedative hypnotic drugs which happen to include alcohol. Synergistic is like 1 plus 1 equals 10, it’s one or the other.”

“Any beer left?”

“About a six pack but it’s old.”

“There’s not much alcohol in a bottle of beer. I have the beer with the chili and save the pill for later.”

“If you’re saving the pill for later, I can mix drinks.”

My thinking was we were talking about a single cocktail/highball before eating followed by the food and taking the pill around bedtime. I didn’t take a pill either. She wanted an Old Fashioned and it sounded good so I made 2. The crockpot had been switched to low and biscuits were taking time. We were down to the last sip when the kitchen timer for the biscuits went off. She had set out a short stick of butter so we were set.

“Did you change the ingredients? That chili was better than what I make.”

“I added a small amount of garlic powder as an experiment because it seemed to be missing something.”

“How much?”

“A well rounded ⅛ teaspoon so probably a leveled ¼ teaspoon.”

“Anything else?”

No. I used the 7% ground beef to save the ground chuck for hamburgers. One of the mistakes people make with hamburgers is using too lean of a ground beef. The lean stuff dries out too much when you grill the hamburgers."

"We won't have to worry about hamburgers… no buns."

"I can make buns from either the yeast biscuits, yeast bread or from scratch."

"About the only thing we can conclude happened, at the moment, is an earthquake on the New Madrid."

"Then explain the problems with communications."

"I don't have a clue."

"I can wait to find out."

"We sure won't run out groceries. So you know how to make mayonnaise?"

"Isn't it a thick, creamy sauce that consists of a stable emulsion of oil, egg yolks and either vinegar or lemon juice?"

"My aunt always used vinegar."

"And, my aunt always used lemon juice, so either will work. Do we need mayonnaise?"

"Not for a year."

World War Three – Chapter 13

Sometime after the earthquake we heard a mighty explosion followed by another of lesser intensity.

We were running on battery power. The plans were for the generator to kick in periodically and recharge the batteries. Although set to not cut in until the batteries reached a charge level of about 30%, that was adjustable and could be changed. The point for the generator to kick out also adjustable. We used an amp hour meter to determine the level of charge.

The effect was the generator ran at 100% capacity for quite some time and then the generator cutout when the batteries were at 99-100%. Theoretically, the problem with that was the batteries not being fully charged when the generator need servicing at 500 hours, forcing me to watch the hour meter.

Five-hundred divided by 24 equals 20.833333 days and .083333 times 24 equals 20. Translated to a practical value, I would have to shut down the generator every 20 days plus 20 hours, let it cool and service it. The battery charger I had was an AV PosiCharge™ DVS with dual chargers, one for each battery bank, and a charging rate of 250 amp hours for each bank. One bank holds 7,000 times 24 or 168,000 amps divided by 250 equals 672 hours or more than one ‘generator cycle’.

What it amounted to was running the generator for 500 hours, servicing it, and running it for an additional 172 hours to have the battery bank fully recharged. However, I realized that the generator had been set up to kick in when there was no commercial power when the batteries reached a 30% power level which was 100,800 amp hours still available. Moreover, the installers had left the generator kick out somewhere between 99% and 100%.

With pen, paper and calculator I determined that the run time to restore the batteries from 30% charge to full charge was about 235,200 amp hours or a generator run time of 470.4 hours. Therefore, when the batteries were fully recharged and the generator shut down, all I had to do was wait for it to cool off and service it and it would be ready for the next time the batteries hit a 30% charge level. I wondered why they hadn’t told me.

The shelter computer wasn’t connected to the internet unless Judy or I plugged in the Ethernet connector, by design. In fact it wasn’t connected to the power line unless we plugged the power line pigtail into the back of the computer, again by design. With as much rebar, steel mesh and copper mesh as was in the overhead and attached to the inside block wall under the 2×6 framing the entire shelter was a huge faraday cage. Why take chances, if an EMP hit while we were connected to outside power we might be toast? It was easier to keep things like the communications gear and computer unplugged and in the Faraday cage.

We had eternal darkness living in the shelter. Not knowing what to think about the situation, we carried our M50 gas masks. One day I decided it would be a good time to move more coal into the cabin and we headed up the ramp. When I shined my Maglite out of a window the light was absorbed.

“Houston, we have a problem.”

“Huh?”

“Look out the window where I’m shining my Maglite.”

“I can’t see anything.”

“Exactly. That is probably ash with a little smoke in the air.”

“What caused that?”

“We haven’t had the typical pattern of aftershocks one would expect if the New Madrid let loose on its own. Considering the timing, I’m thinking somewhere far off. If could have been one of our Supervolcanoes, and if so, we’ll get volcanic ash. Although some of it could be smoke mixed with volcanic ash.”

“Rollin, I’m going back down, have a drink and going to bed; and, you should do the same.”

“Ok, what do you want to drink?”

“An Old Fashioned?”

We had the cocktail and went to bed. Each day after that, we’d check from the cabin to see if the air was filled with ash. And, it slowly cleared with visibility going from a few feet to a few yards to ⅛ mile, ¼ mile and ½ mile.

“I think we should go into Mountain Home and see how the residents fared.”

“Okay Rollin, I want to check on some friends. How should we be armed?”

“Shotguns in the gun rack in the back window with my HK417 and you carrying your HK417 to give us covering fire, if necessary.”

“Do you think many made it?”

“I’m not really sure although I suspect a few managed to survive. We’ll pull the trailer in case there is any grocery store food that we find and can use. The generator only charged the batteries twice and 470.4 hours times 3.3gph times two is a bit over 3,100 gallons propane. While we don’t need it at the moment, we should see if we can find a

3,000 gallon 10 wheel delivery truck and fill it. I can drive it back to the acreage and refill the propane tank."

"Would you rather have it and not need it or need and not have it?"

"Exactly. We need to check auto supply stores and get more filters, oil and antifreeze for our vehicles for the same reason. Under the same philosophy, we should get brake pads and new rotors since I know nothing about turning rotors."

"How about some grease and a grease gun?"

"Add it to the list."

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At first, we didn't see any people out and about. We checked Wal-Mart and most of the food had been taken but not all. We took the remainder of the food that we could use and checked various departments including men's and women's clothing, shoes, sporting goods for weapons and ammunition, automotive, etc.

We then checked other food sources and just took enough to finish filling Judy's list. Two auto supply stores provided the automotive supplies and we went to check the propane dealer. He had 3 delivery trucks, 2 empty and one full. The can of ether we picked up at the auto supply and a jump got the truck going, roughly at first. Looking in the office produced an open gallon jug of PRI-D and I added an appropriate amount to both diesel tanks. After a while, the running smoothed out.

Before leaving, I found an installed 60kw diesel generator and added PRI-D to the base tank. After the PRI-D worked its magic, we could return and fill the 2 empty delivery vehicles. The thought occurred to me if we filled our propane tank from the truck we were taking home, we could take it back later and replace the propane we put in the tank, leaving us with 9,000 gallons in reserve.

The following day, we picked up the 2 delivery trucks, filled them and took them home. That pretty much filled the day and the following day, I took the empty truck in and refilled it, eliminating one of several line items (goals). Judy brought up the fact that we better accumulate all the canned goods we could to avoid them freezing and becoming unusable. That took 4 days. While I agreed with her thinking about the freezing, we collected enough bottled and canned products that a good share of them would probably spoil anyway unless stored above 32° and below 40°

The next line item on the list was automotive and was spare batteries and mounted and unmounted tires. The auto parts stores supplied the batteries and a tire dealer one set of rims for each vehicle and 8 tires for each vehicle. I eventually was able to mount 8 tires, 4 for each vehicle, and figure out the balancing machine. That eliminated the automotive line item, excluding fuel. The Yellow Pages told us where to look and we found

the gas/diesel distributor. His delivery vehicles included tractor-tanker delivery vehicles for service stations and small 10-wheel delivery trucks probably used to fill tanks like the one we had, farm tanks.

Checking around, we found 5 gallon and 1 gallon containers of PRI-G and PRI-D. The various large tankers had the capacity listed on the side of the tankers, 9,000 gallons. That left us with the task of getting one of the semi-tractors to run. We first treated the fuel in the saddle tanks with PRI-D. Then, we had to get the 100kw 3-phase generator running. I tried the same trick as before, adding PRI-D to the base tank after shutting off the fill pipe from the large storage tank.

We let everything sit for 3 days before trying to get the delivery trucks started. They started with a jump and a shot of ether so we filled them and took them home over a several day period. The semis were a greater challenge and we ended up getting a battery charger from an auto parts store and using my old China diesel 12kw generator to recharge the batteries on one truck. When it was running, we manhandled the battery charger back into my pickup. We then added the PRI-D to the tanker and filled it.

Eighteen thousand gallons of diesel as a standby supply was probably more than we could use, just as 500 gallons of stabilized gasoline was more than we would probably ever use and we could now strike the gas and diesel line items.

It was very cold outside and getting colder and Judy was pressing me to check out the Wal-Mart in Flippin. We went into Mountain Home and got the same Ryder truck we'd probably used before, stabilized the fuel and returned home to drop off my pickup. We then went to Flippin and found the Wal-Mart there had been stripped much like we had stripped the Mountain Home Wal-Mart. We turned around and went home, keeping one eye on the rearview mirrors.

"I think our salvaging days just ended Judy. I had the feeling in Mountain Home that we were being watched and more so in Flippin. We have about 140 cords of firewood less the amount used and a large quantity of coal. We can haul in the coal as needed."

"That's going to be a lot of difficult work Rollin; can we just use the wheelbarrow to bring in what we need when we it?"

"Of course, what was I thinking about? I didn't check either the coal guy or the firewood guy. Frankly, I wouldn't mind having more of both."

"If either or both made it, they'll probably contact us. Besides, didn't you say you had 2 chainsaws?"

"Yes we do and for all practical purposes they're nearly new although I do have a selection of spare parts. That's like the situation with the generator, I'm not a mechanic."

"How long have you had the gasoline?"

“Got that in 2006 for the chain saws and added a pint of PRI-G every year so it should still be good.”

“How much do you have invested in this set up?”

“Most of the money I had when I retired and about ⅔ of my post-tax retirement pay.”

“And your funds are mostly hard currency?”

“All but the last three retirement checks which I deposited and later withdrew so we had cash for incidentals.”

“How did you figure it all out?”

“I didn’t. What I did was a mixture of ideas I gleaned from…”

“TOM and Jerry?”

“Add Grand58742 and a couple more of the PAW writers to the mix and you have it covered.”

“Grand58742?”

“Yeah, Grand58742.”

“Why are the cabin walls so thick and why can’t the windows be opened for circulation?”

“You’ve noticed that the exterior and interior logs are rounded, right?”

“Yes, but what does that have to do with what I asked?”

“How thick do you think the walls are?”

“I never gave it any thought, why?”

“Both sets of logs are double tongue and groove and essentially separate. The outer 10” layer is backed by doubled up 1¼” Lexan, completely. The Lexan is covered by 3” of foam insulation except for the windows and the insulation is covered by a 6” layer of tongue and groove logs with rounded side facing inward. The total wall thickness is 21½”. It is virtually bulletproof. They certainly aren’t bulletproof against something like a .50BMG but are highly bullet resistant.

“That’s why those shutters are constructed as they are. The wood is a laminate while the actual shutter under the laminate is 2” of cold rolled steel. I doubt their good against

.50BMG but anything else would play hell punching through the walls, shutter and doors."

"What are the doors made of? They seem a little heavy but aren't difficult to open and close."

"They're the same as the shutters but the cold rolled steel is 1" thicker. The only thing I didn't ask them to design in was lead sheeting."

"Why not?"

"From the description I just gave you, you do understand that with exceptions, the cabin is a sealed box, right?"

"Except for the doors I guess so."

"The one section of attic flooring that was already there supports the mechanicals needed to keep the cabin habitable. In his story *Bad Times*, Jerry described a home that was so tight that it required a heat and humidity air exchanger to keep fresh air circulating. I believe that this cabin may be even tighter than Roger Tanquirdy's home. The capacity of those larger air systems from American Safe Rooms would allow us to exchange the air in the cabin and shelter half as often."

"What's the downside? Everything is a series of tradeoffs."

"We can't shoot back from inside the cabin. But we can exit using the emergency exit, if necessary."

"How do you lock the shutters when they're closed?"

"You stand by this 'window' and I'll show you."

I went outside and closed the shutters for the window Judy was looking out of. When the shutters were hard against the stops, I went back in and pointed to a small protrusion on either side of the 'window' and said, "Slide these inward." They traveled about 2" sliding into a block of metal on the inside of the shutter. "I defy you to get the shutters open from the outside."

"This is more of a Castle than a Cabin."

"Strange you should say that, I have both *The Cabin* and *The Castle* in my fiction directory under the *Other* subcategory."

"One more question. This couldn't have been inexpensive, so why did you build it this way?"

“Would you buy, ‘because it seemed like the right thing to do at the time’?”

“Nope.”

“How about ‘because I’m a crackpot survivalist’?”

“Closer, but nope.”

“Well, Steve suggested it was because I resigned from the world.”

“Now, that I can believe. Why, broken hearted?”

“As a matter of fact, sort of. Nobody can hurt you if your shell is thick enough.”

“I’m so sorry.”

“It was none of your doing. I did it all by myself to myself. At the time you couldn’t have convinced me otherwise.”

“I half tempted to take your head off, you know? What happened didn’t affect only you; it affected me too.”

“I know and I can’t begin to say I’m sorry enough times.”

“You already said it and once was enough. Are we going to live through this?”

“I don’t really know other than we’re going to live until we die. I think we can live here for the remainder of our lives without leaving the place other than to get more coal or firewood.”

“We’d better do that sooner than later.”

I knew that both the coal dealer and firewood harvester had ‘yards’ where they stored their inventories. I didn’t know where they were, only that they had them. Coal has more energy than wood. One ton of coal equals about one cord of wood (one short ton of anthracite equals 25 million BTU v. one cord of wood equals 20 million BTU). I had always purchased Chestnut sized coal to avoid the premium price of stove coal. The invoices for both dealers weren’t much help, listing phone numbers and Post Office boxes.

We discussed possibilities and decided to locate the coal first and haul all he had, dumping it in a pile. Afterwards we could bring out a front end loader to reload the coal bunker. With that completed we’d find the firewood dealer and do the same with him, hauling a dump truck load at time, dump and stack it. Plan B in both cases was paying for the product and letting the dealer deliver and dump or deliver and stack. We didn’t really have a plan C.

Although the coal dealer wasn't around, we located his manager. We offered his cost and the delivery charges without the markup. He thought it over before agreeing; most of his usual customers were nowhere to be found. At that, he only agreed to deliver half their supply of anthracite, some 60 tons. It would be delivered and dumped and it was up to us to move it as needed. He would take cash on the barrel head, collecting for each load delivered before making additional deliveries. He also directed me to the firewood lot.

"I have 5 spare packages at $175 per cord and it will have to be gold or silver. Do you have $17,500 in gold?"

"At what price per ounce?"

"$2,500, take it or leave it."

"Yes we have 7 ounces in Gold Eagles."

"That will be prepaid before each package is delivered."

"Stacked, right?"

"If that's what it takes, I suppose."

"Here's one ounce for your first delivery. Mind you, the coal dealer will be delivering and dumping coal."

"We'll work around him. When?"

"Just soon as you can get a delivery truck loaded."

They must have both been hungry; the orders were both filled in full before sunset with half of the firewood sacked. They returned the following day and a crew stacked the remaining firewood. To avoid mixing the softwood and hardwood, they were stacked separately.

We were left with a single problem, storing the canned and bottled goods between 32° and 40°. Judy remembered something from *Disaster in the Burbs* and we went hunting a reefer trailer, found one and brought it home. After some discussion, it was decided to add a propane heater with a thermostat to use in the winter and plumb the propane cooling unit so the temperature in the trailer was a 'well regulated' temperature of 32° to 40°. (Fahrenheit folks, I don't do Celsius well. However, we're talking between 0°C and 4.45°C… I have Josh Madison's *Convert* Program.)

Let's compare wood and coal. One cord of wood is 128ft³ while one ton of anthracite is 40ft³. However, the ton of coal is 25m BTU and the cord of wood is 20m BTU. It follows that 1¼ cords of wood equals 25m BTU. One and one-quarter cord is 160ft³. It follows

that by volume, coal has ~4 times more energy than wood. Approximately because the moment you say something is absolute, 15 people jump down your throat to dispute your claim.

Recap. We probably have a lifetime supply of wood and coal for heat, years' worth of propane, more than a lifetime supply of diesel and, considering my age, too much gasoline. We have food for 2 for 15+ years and enough ammo for a couple of wars. Based on my combat tours and how much ammo I actually fired at the other side, World War 15. The Rules of Engagement discourage firing at the other side unless they're firing at you or attempting an ambush and the latter is iffy. You hold your fire until you identify their weapons.

World War Three had been bad enough despite there being no targets in our TO (Theater of Operations). The seismic activity, however, did include our TO. We had decided to strictly limit our TO to our acreage unless we needed to do additional salvaging. Steve's supplies had included sandbags and after Judy and I considered using them, started filling them with dirt taken from both sides of the track into our place.

I did most of the digging, putting in the 4' deep holes and we worked together filling the sandbags. We had enough bags to create a ring around the fighting positions with 3 layers of sandbags in width and height. We stocked the fighting positions with ammo, 40mm and hand grenades and one carton of 5 LAW rockets, M72A7. We added loaded magazines for the Tac-50s, M1As, HK416s, HK417s, PT1911s, Walther PPKs and 25 round boxes of shotgun shells. We also added some of the Nitro-Pak Hungary Man MREs and a five gallon can of water and a folding camping potty. The stocking was a just in case measure and assumed we'd be able to get into the 'foxholes' at the first sign of trouble.

Prepping is much more than having a bomb shelter with a storeroom full of food, generator and etc. Prepping is a mindset and proper preparation includes anticipating future needs and preparing for them. Only the coal delivery people, the firewood delivery people and fuel delivery people know exactly where we're located but that has the potential of being 3 groups of people too many.

Someone had gotten to the gun stores ahead of us and had taken the MBRs, including M1As, and Assault Rifles, including AR-15s, magazines and all the ammo in 5.56×45mm and 7.62×51mm. While it could have been strictly for self-defense, that could be a dangerous assumption. Plus we both had the feeling that we'd been watched in both Mountain Home and Flippin. While we knew the gun dealer I used could get M1As and Tac-50s and stocked a few M1As and AR-15s, he only special ordered the pricey firearms like the Tac-338 and Tac-50. Plus, he carried very little ammo in those calibers. We took what he had, less than a case of Hornady, in each caliber.

While we didn't maintain a watch rotation since there was only the 2 of us, we kept an eye open, just because. Sooner or later someone would happen on our digs and realize

we had a lot of things ‘put up’. Of course, that said, it happened sooner rather than later and we managed to get into the ‘foxholes’ before things got bad.

There must have been 8-10 of them and they had a mix of firearms including MBRs, ARs, shotguns and handguns plus knives if they could manage to get close enough. Our goal was to make sure they didn’t get very close at all. One of them exposed himself and Judy took him out before I could get him in my sights. Then another tried to move to a better position and earned a round of 7.62 from my HK417. That only cut the odds marginally. They tried to maintain cover as they moved closer but confused concealment with cover and another paid the price. Judy and I were in contact using our Business Band portables.

“Got one trying to flank you Rollin and I can’t get a good sight picture.”

Bang

“That one?”

“Yep. Looks like they going to ground.”

“That won’t last too long; these guys are hungry for a kill.”

Bang

“That SOB tried to flank me. Watch yourself Rollin. Wait, they are sort of grouped up, can you see them?”

“Nope.”

“I have a treat for them, a HEDP.”

BOOM

“That cut’s them down to size. How many did you get Judy?”

“Three.”

“That makes 7. How many more are there?”

“I see 2 more.”

“And, I see 1. Change magazines and switch to full auto. On the count of 3; 1, 2, 3. Fire.”

“That’s got them.”

“Hold tight Judy.”

“You cover the front, Rollin, I’ve got to pee.”

Ka-bang. There was at least one left and it sounded like a magnum caliber rifle. Maybe a .300 Winchester magnum, a long range cartridge that could penetrate the sandbags if the shot were placed just right (at a seam).

“Keep your head down Judy, that’s a magnum caliber.”

She apparently brought her Super Match and spotted the shooter when she finished her bathroom break.

Bang

“Got him. Are there anymore Rollin?”

“I’ll be darned if I know; that was at least one more than I thought there were. You have your Super Match?”

“Affirmative.”

“Sit tight.”

“10-4.”

The wait seemed endless, but after about a half hour, I eased myself out of my ‘foxhole’ after informing Judy I was ‘on the move’.

The first few were indeed dead. However, one wasn’t and I announced, “Fire in the hole,” before I dispatched him.

After accounting for the entire group of attackers, I advised Judy I was collecting weapons and she should standby, covering me until I finished. Unable to carry the weapons in a single trip, I started with most distant and worked my way in, dropping the weapons and ammo at her ‘foxhole’. Meanwhile, Judy was reloading her magazines and setting out each of her firearms that needed cleaning. I finished collecting firearms, ammo and knives and moved them into the cabin. Lastly, I refilled my magazines and took my ‘dirty’ firearms into the cabin.

“We still have to do something with the bodies. That can wait until after we’ve cleaned everything and replace our firearms in the ‘foxholes’.”

World War Three – Chapter 14

“Do you think this will be an ongoing event?”

“It’s certainly possible. I pray it doesn’t happen enough to be considered ongoing.”

“Are we going to be okay?”

“We can be careful; there’s no way I can guarantee we’re going to be ok. As you have seen, there are 3 kinds of people, the good, the bad and the apathetic. The latter group can quickly become members of either the good or the bad depending on circumstances. A parent with a starving child will probably do anything to see that child fed. That’s why my primary concern was simply filling in the STS foods.

“Your point about preserving the food that would be damaged by the cold is well taken. Volcanic winter is proven fact as shown by *The Year Without a Summer*, 1816. What we should do is locate other survivors and share those goods with them.”

“Are there other survivors?”

“Sure there are but the count was reduced by 11 today.”

“Why didn’t they just ask?”

“I have no idea; perhaps they scouted the place out, saw all the coal and firewood and concluded we were preppers who were armed to the teeth and lacking any Christian charity. Or, they simply could have been part of the bad.”

“How do you want handle it?”

“Load up a pickup load of food and start in Flippin, working our way back to Mountain home. First, we need to clean all of the firearms, match the ammo to the weapons and dispose of those bodies. I’ll do that while you figure out what to include in the first load of food.”

When I cleaned the recovered firearms, the ARs when into the pile of guns to trade along with the MBRs that weren’t M1As. That gave use 6 long arms to trade along with 5 handguns. I added the 4 knives to the trade goods. The Remington 700 turned out to be a Model M-24 SWS in .300 Winchester magnum with a Leupold, Ultra M3, 10 Power scope and a Surefire suppressor. I located the case and accessories in the old pickup they used to get to our acreage. I decided to add that to our collection. There was a gully on our property that became the final resting place of the attackers after I first dumped the bodies and used the front end loader to cover them with about 4’ of soil.

The ‘foxholes’ were resupplied and covered over, concealing them. A trip to the Baxter County Sheriff’s office provided additional .300 Winchester magnum Black Hills 190gr

BTHP ammo and a bullhorn. I figured we could use it to announce that we had food available at the pickup in the Wal-Mart parking lot.

We would go the next day. Before we left, a decision about which weapons to take was required. We concluded that we'd each take a HK416, HK417, 590A1, PT1911, Browning Hi-Power and PPK with enough loaded magazines, where appropriate, to defend ourselves for an extended period of time. While we could only fire one long arm at a time, we could switch magazines and weapons if we ran out of ammo for what we were using. We weren't literally armed for bear since we didn't take the Tac-338 or a Tac-50.

"What did you select Judy?"

"Three pails of hard red wheat, yeast, sugar, oil and my Country Living Mill so they can produce bread. Two pails of Durum wheat so they can produce pasta. One pail of corn for corn meal. Four cases of pasta sauce and 2 cases each of corn and green beans. A pail each of pinto beans, great northern beans and navy beans along with 2 fifty pound bags of rice. Salt, pepper, baking soda, baking powder, catsup, mustard and finally half a case of tobasco sauce. And for treats, cases of peaches, pears and fruit cocktail. I did include 6 boxes of candy bars.

"I didn't include things like the pancake mixes, biscuit mixes or cookie mixes but I did include a pail of quick oats, a pail of instant non-fat milk and some cans of whole egg powder. They can make comfort foods from the other things I included. I put everything in the back of the pickup. Did you reach a final decision on the firearms from the attackers?"

"We're keeping the M1As and the .300 Win Mag M-24 SWS rifle. That leaves us with 6 long arms, 5 handguns and 4 knives as trade goods."

"When are we going?"

"Yellville tomorrow, Summit the next day, Flippin the next day, Cotter the next day, Gassville the next day and finally Mountain Home. Even God rested on the 7th day. Some of those communities are small and we might be able to do 2 in 1 day."

"Will we need to put a second identical load in the trailer?"

"I think not. Assuming the number of survivors is proportional to the size of the community, we should be able to do 2 smaller communities with the same amount of supplies as the large communities. Yellville population was ~1,300, Summit was about 600, Flippin around 1,400, Cotter maybe 1,100, Gassville 2,200 and Mountain Home was just shy of 13,000."

"But Mountain Home is almost a Ghost Town."

“It is and that makes me wonder where that group of 11 guys came from. I’m reasonably certain that .300 Win Mag M-24 SWS rifle belonged to the Baxter County Sheriff because I found more 190gr BTHP match ammo there and it was the same ammo that guy had. Between what he had and what I found, there are about 1½ 200 round cases.”

“If you’ll help me Rollin, we can set out supplies for the second day and we’ll try to stay one day ahead.”

“Sure Judy; tell me something, where are you getting your energy, it’s been a long day.”

“I don’t have that much energy left, dear. After we’re finished and eat, I’m going to need a good 12 hours of sleep.”

“The sleep is a very good idea. We’ll need to be at the top of our game when we’re looking for survivors. You’ll no doubt meet the good, the bad and the apathetic when we find some. As I implied before, beware the apathetic. We’ll need our handguns cocked and locked with one up the pipe and full magazines.”

“Condition 1, Color Yellow?”

[*Condition One*: A round chambered, full magazine in place, hammer cocked, safety on. *Color Yellow*: Yellow: Relaxed alert. No specific threat situation. Your mindset is that “today could be the day I may have to defend myself”. You are simply aware that the world is a potentially unfriendly place and that you are prepared to defend yourself, if necessary. You use your eyes and ears, and realize that “I may have to shoot today”. You don't have to be armed in this state, but if you are armed you should be in Condition Yellow. You should always be in Yellow whenever you are in unfamiliar surroundings or among people you don't know. You can remain in Yellow for long periods, as long as you are able to “Watch your six.” (In aviation 12 o’clock refers to the direction in front of the aircraft's nose. Six o’clock is the blind spot behind the pilot.) In Yellow, you are “taking in” surrounding information in a relaxed but alert manner, like a continuous 360 degree radar sweep. As Cooper put it, “I might have to shoot.”]

“Exactly and we watch each other’s backs to the extent possible.”

Despite its small size, Yellville is the County Seat for Marion County. The crowd that responded to our announcements over the bullhorn numbered in the mid-60s and they were a pathetic group of people, bone showing skinny, eyes still showing residual effects of the volcanic ash and disorderly; everyone trying to get to the first place in line.

“Listen up folks; we have enough for everyone until we can come back again. You are going to need containers for your share of what we brought. Understand, that will be an equal share, a given amount for each person. We should be able to provide humanitarian supplies until some government organization gets its act together and takes over. That said; our resources are not unlimited. We need someone to grind the wheat since

we only have one mill. There are two kinds of wheat, hard red for bread and durum for pasta."

Had it been a military operation, an observer would have called what followed a cluster …. It was what it was including the anticipated griping, assertions that the division 'wasn't' fair and that we hadn't brought what we should have.

"Has everyone gotten their allocation? Some of the foods are what you would expect to find in a grocery store and some are Long Term Storage foods. We have identified several communities in Marion and Baxter counties that we will assist as long as we're able. We can't supply meat. Some of items are high in vegetable protein and are adequate substitutes. We recommend that you check with grain elevators, farmers and especially rice producers and packers. Rice is the staple food of over half the world's population. It is the predominant dietary energy source for 17 countries in Asia and the Pacific, 9 countries in North and South America and 8 countries in Africa. Rice provides 20% of the world's dietary energy supply, while wheat supplies 19% and corn 5%.

"We do have a few trade goods including sanitary needs and other things. We will accept things gathered from grain elevators, farmers and rice producers and packers in exchange for those trade goods. We will also accept gold and silver for a select group of those trade goods. We can discuss that when we return."

While we noted firearms and even one fellow with a compound bow and a dozen or so broad tip arrows, no one in Yellville made any threatening gestures despite griping and other complaints. I had the thought that it may have been due to the fact that we told them 'We'll be back'.

When we returned home, it was with relief that any serious problems had been avoided. Tonight, supper would be a crockpot beef roast with onion and carrots plus instant potatoes and brown gravy mix. The bread in the wood stove oven was done as perfectly as one could expect and Judy had taken butter out of the freezer.

"How about I load tomorrow's load while you get supper around? I don't know why, but I'm starving. Maybe all the nervous energy burned breakfast off."

"I won't be long Rollin; the roast is done and the potatoes and gravy will only take a few minutes."

"I'll hurry."

°

I had used a crockpot for years for meals requiring minimal effort and Judy had done the same because she worked. The major advantage in addition to the minimal effort was the limited energy used and our energy came from nature, most of the time.

°

“Why were they angry with us?”

“I’m not sure; maybe because we had and they didn’t. Unfortunately the only decent access to most of the communities is Highway 62/412. Eventually someone is going to get something running and follow us home. If they think about it, it’s likely someone will figure out adding a fuel stabilizer and changing all of the filters on a vehicle will get them transportation. It’s not the situation we’d be in if we had an EMP or HEMP event.”

“What’s next? TOM claims bad things happen 3s.”

“You’re excluding the attack?”

“Aren’t you Rollin? That was skirmish; uneven odds but a skirmish nonetheless. From what you’ve said, we can expect more skirmishes.”

“Which brings up something I realized today; we be better off with the HK416s as long arms because we can carry more ammo than with the HK417s.”

“Why did you insist someone grind their grain on the spot?”

“How many Country Living mills do we have?”

“I had 2, my primary and a spare.”

“That’s what I have also, only 2. We’re 3 short if we supply each community with one and keep one for ourselves.”

“I wouldn’t want to get down to just one, despite having parts kits.”

“Neither would I and that’s why I made them grind the grain on the spot.”

“I’ve having second thoughts about doing this.”

“We must make one round since we’re committed. We can evaluate the remaining supplies and based on what we’ve distributed the first time, determine the amount available for the second round. We may only have enough for two rounds.”

“What will we do if we run into trouble? You know… those that prefer to take rather than ask?”

“If there’s any way to make a distribution we’ll make it and not mention coming back. Otherwise we’ll leave and eliminate that community from the list. Either way, they’ll only get the single visit.”

“Yellville seemed to have 5% of the population that survived the war and volcanic eruption. Will that be representative?”

“I’d prefer to make that decision when we’ve visited all 6 communities.”

°

At the end of 6 days, we had our answer; the further east we went, the greater the percentage. Summit had 45 survivors, 7.5% of their population, Flippin had about the same 110 or 7.9%, Cotter 88 or 8%, Gassville had 196 for 8.9% and Mountain Home was 1,183 minus the missing 11 men for a total of 1,172; a pre-skirmish rate of 9.1%. The total population for the 6 communities was 1,676 not counting the 2 of us. Mountain Home wasn’t the Ghost Town it appeared to be. We didn’t have anywhere near enough food to make a second round. We realized it had been a good suggestion we gave to each community about salvaging grains. I traded two rifles with 7 magazines each and a case of ammunition each in Mountain Home for 7 of the 10 Country Living mills someone was offering for trade. We made a second trip to the first five communities, giving each a grain mill and their ‘share’ based on population of what remained in the semi-trailer.

The majority share went to Mountain Home, of course, so we pulled the trailer in and dropped it off explaining they had to keep the cooler and heater supplied with propane. This ended our short-lived adventure with salvaging food to keep it from freezing. Not one person in Mountain Home inquired about the 11 men we were forced to deal with in the skirmish. But, we left tracks and someone followed us home. I guessing they saw the stacked firewood, pile of coal and tanker of diesel, propane delivery trucks, made a note and left.

This area isn’t the flattest area in the US being in the Ozark Mountains and when the snow got deep, travel was nearly impossible. We had a relatively quiet winter that lasted far too long. I kept the front end loader parked near the cabin pointed towards the wood pile and when we need wood, I hauled a large pile to the apron in front of the cabin. This allowed me to keep the wood box filled easier and the coal merely required raising the slider and filling several buckets.

Those double sheets of ballistic Lexan transmitted the cold very well, forcing us to hang heavy wool blankets over each with one tied back to let some light in. Since even one uncovered window defeated the purpose of the wool blankets, we turned on the lights and covered the window. A small fire was kept in the wood burning kitchen stove to add to the heat put out by the coal burning ‘Franklin’ stove, keeping us warm.

Mountain Home weather averages:

Annual high temperature: 68.9°F
Annual low temperature: 47.4°F
Average temperature: 58.15°F

Average annual precipitation - rainfall: 48.07 inch
Days per year with precipitation - rainfall: N/A
Annual hours of sunshine: N/A
Average annual snowfall: 11 inch

Without a heat source, the shelter was balmy 58.15°F and the cabin slightly cooler due to the outside temperature and wind.

We only left to gather more firewood from the stack for the kitchen stove and coal for the 'Franklin' stove. The overall mood put me in mind of Seattle, Washington where, according to a guy I served with, it rained 10 months of the year. He claimed the city was gloomy most the time. Never been there, so I'll have to take his word for it.

It took 6 months for the snow to start melting and another month for it to be completely gone. We were desperate for contact from another human being, provided they didn't come in shooting. We were fortunate in that respect because the first people to approach the acreage were Arkansas Army National Guard. The guy in charge was First Sergeant (E-8) named Ott.

He explained that it was just a census and said his day job was a History Professor at ASU in Jonesboro, teaching Medieval History. He'd gotten his PhD from Saint Louis University In Medieval History and returned to Jonesboro after he graduated, giving up his job with the Social Security Administration that paid his way through his PhD program.

He asked if we had any firearms, noting that we were 'out in the boonies'. I admitted we each had a M1A Loaded, a Mossberg 590A1 and a PT1911. He laughed and said he had the same; and, since he had more than enough ammunition was carrying all 3.

"I got those from my father back in 2012 along with a Sauer und Sohn 38H."

"Is TOM your father?"

"His name is Gary but he used the pseudonym of Tired Old Man, so I suppose some might have called him TOM."

"Past tense?"

"He had COPD and Palmdale got a fair amount of ash from Long Valley. They wore N-95 filter masks but the ash finally got to them and Dad, his wife, and my half sister and her two children plus my step sister succumbed from ash cutting up their lungs."

"How long do you have in?"

"Twenty-three years. I planned to retire at 24, but we've been stop-lossed."

“I had 37 when I retired as a Command Sergeant Major. Heard a rumor we were being sent back to Afghanistan and I had to reenlist for 3 more or retire. I saw the Desert, did two tours in Iraq and one in Afghanistan.”

“FEMA is starting to get reorganized and they’ll eventually be distributing food. It may be a while, they couldn’t handle Katrina and this must be 1,000 times worse.”

“If you run low on 7.62, I have several cases of PPU 168gr match.”

“I wouldn’t mind having 168gr. What Dad gave me was 2,880 rounds of 147gr South African. That stuff is accurate, but it sure isn’t match and the 1:11 rifling is perfect for 168gr.”

“Round for round swap?”

“Sure, give me a hand; a full ammo can of the South African is 1,260 rounds and the empty cans go 10 pounds.”

“I’ll give you a full 1,000 round case of PPU and another 13 20 round boxes from the same lot.”

“Wouldn’t have any 71gr .32ACP ball would you?”

“Not much; 2 50 round boxes. We use Walthers in .380.”

“PPKs?”

“Yes.”

“Dad always wanted one but never got one. Thanks for the swap, maybe I can shoot tighter group with this ammo.” [Like <0.8 MOA at 500 yards with iron sights wasn’t good enough.]

That’s the last we saw of the Sergeant. TOM and his family in California had bit the dust. When I considered the probable weather, a low pressure system rotates counter-clockwise in the Northern Hemisphere and if a low passed through when Long Valley let go, it would drag some of the dust to the southwest. The succeeding high pressure area would be rotating clockwise and add to the effect by continuing the flow of dust to the southwest. Even if they didn’t get much ash fall, the dust could have been debilitating.

Four months later when we were canning everything we could, a HMMWV pulling a trailer pulled up and we received a 3 month allocation of staples, 30 pounds of ground beef and 2 boxes of Speer 95gr .380 Lawman FMJ.

We divided the ground beef into 1 pound packages and put them in the freezer. The staples were added to the STS in the shelter storeroom. Over supper that night, we de-

cided to drive up to Mountain Home the next day because Judy said we didn't have to harvest anything from the garden the next day. We agreed to carry the same arms we had when we made distributions. For the heck of it, I planned to take the Remington 700 Model 40-XS Tactical Rifle system with the Surefire suppressor and ammo with us.

There was a new Sheriff in town, the former Chief Deputy and he liked to have a heart attack when I gave them back their sniper rifle.

"How did you come by this rifle?"

"Eleven people attacked us at our acreage. We prevailed. One of the men was carrying this rifle and I speculated that it was a Law Enforcement weapon. We had the day off from gardening today and I decided to bring it in."

"I notice you're packing. Do you have carry permits?"

"Afraid not."

"Let's get your prints and I'll issue you both permits. With things being as they are now, County Sheriffs are issuing the permits rather than the State Police and the number of handguns isn't limited to 3."

"We usually only carry 3 anyway, a .45ACP, 9mm and a .380ACP, 2 of which are concealed."

"Colt or Taurus, Browning and a Walther?"

"You read the book?"

"Nah; it's just that those are the most popular. We've changed the permit process slightly and in addition to you fingerprints, we'll take mug shots and photocopies of your drivers' licenses. We'll also give each you a notarized photocopy of your information just in case you lose your wallet or purse. What do you have for firearms?"

"Two Tac-50s, 1 Tac-338, 3 M1A Supper Matches, 3 M1A Loadeds, 3 HK417s, 3 HK416s, 3 590A1s, 3 PT1911Bs, 1 M1911A1, 3 Browning Hi-Powers, 3 Walther PPKs plus the 2 M1As we collected after the attack. We traded off 6 long arms… 2 PTR-91s, 2 AR-15s, 2 shotguns, 5 assorted handguns and 4 knives."

"Gun collector?"

"Not really… retired with 37 years in the Army as a Command Sergeant Major. We acquired what we knew would work and added to it when we got married."

"Grenade launchers?"

“Yes, but less-than-lethal rounds.”

“Any chance we could call on you as an advisor if we run into something outside our experience?”

“My DI told me to never volunteer.”

“Mine did too. Still, you have many years of experience in the higher NCO ranks I presume?”

“Over 14 years at the level of E-7 or higher. Ok, here’s my cellphone number. Give me a call and if we can help, we’ll come.”

“Your wife too?”

“Ask her, not me.”

“I’ll come, circumstances permitting. While I’m canning, that will be iffy; after that, no problem. And, I am as accomplished with my firearms as Rollin is with his. We have exactly the same firearms with extras.”

“How about I make you both reserve deputies? That would eliminate any problems with some of your equipment.”

“Aren’t we a little old for that?”

“Only about 4 years, but who is counting?”

If we wanted uniforms, we'd have buy our own from Propper, but they were optional because we were advisors with badges to make our illegal hardware legal. Mandated uniform was Men's/Women's Tactical Pant (Lightweight) with Men's/Women's Tactical Shirt - Long Sleeve, all in black; optional badge tab included. Outerwear was PROPPER Defender™ Gamma Long Rain Duty Jacket with Drop Tail and the PROPPER Defender™ Halo I Long Hi-Vis Rain Jacket with Drop Tail was optional.

But we were advisers, not deputies and I dug out my MultiCams and we each had 3 complete uniforms, except for the tan rough-side-out boots. But then again we weren't US Army and we had a pair of tan smooth-side-out boots that fit Judy. We were close enough in size, despite the difference in the male and female form, that Judy could take a tuck here and there and get by just fine.

The Sheriff had provided badge cases of the type that bent back allowing one to slip the badge case in the left shirt pocket when it was appropriate and or necessary to display the badge. I even had two parkas in MultiCam, so we had cold weather gear. The government in its infinite wisdom had changed camouflage patterns post-Enduring Freedom and had gone to a pattern they owned to avoid paying Crye Precision. The pattern called Scorpion W2, was developed in 2002 by Crye Precision using government funding. The government had dusted it off and decided on 3 patterns, Woodland, Transitional and Desert. http://www.hyperstealth.com/scorpion/index.html

Expensive items, like body armor, were planned to be produced in Transitional as they would work with Woodland and Dessert and save the government big money. Congress had mandated that all 5 services use the same camouflage. Since MultiCam was a modified version of Scorpion, we could get along just fine. MultiCam was more suited to Arkansas backgrounds than Afghanistan backgrounds, anyway.

The Sheriff had also had our vehicles fitted with mobile radios and issued us each a handheld. We were instructed to wear the radios anytime we weren't bathing or sleeping because one never knew when something would come up requiring our advice.

After discussing it with Judy, I had a local welder fashion a second gun rack that mounted behind the front seat of the crew cab and faced backwards. It held 7 long guns. Between the 2 racks, we could carry 2 M1As (SM), 2 HK416s, 2 HK417s, 2 shotguns and 2 Tac-50s in condition 1 for those times when the response called for immediate action.

Our first call up came in the middle of the night and it was for barricaded suspects. I said what the heck and added 6 HEDP 40mm grenades and 2 M72A7 LAW rockets to the toolbox. The barricaded suspects had night vision and the Sheriff's Department's uniforms were shining beacons for the suspects. The deputies had already tried OC and the suspects apparently had gas masks, because the OC didn't force them out of the detached garage where they were holed up.

The M72A7 is a rocket with low penetration, improved blast effect and uses an improved launcher assembly. The LAW might be a better choice in this situation since it would open a hole in the garage door. I explained it to the Chief Deputy on scene and left the choice up to him.

“I was told you only had less-than-lethal grenades.”

“So, the HEDP slipped my mind. I didn’t want mention the rockets since they’re military only.”

“Put a rocket into that door.”

“Yes sir.”

KA-BOOM

The blast effects put the 5 suspects on their hind ends and the deputies rushed the garage, entering before the 5 suspects recovered. Mark down one for the good guys. It caused a visit later that day by the Sheriff.

“What else do you have besides 40mm HEDP grenades and M72A7 rockets?”

“Forty millimeter Illumination and smoke grenades and more of the rockets.”

“How many?”

“How many what?”

“How many HEDP and M72A7s?”

“Started out with 4 containers of the HEDP grenades and 4 crates of the rockets. Used one grenade against the attackers way back when and one rocket this morning.”

“I’m not familiar with how many units are in each package. How many do you have left?”

“One less of each.”

[72×4=288-1=287 and 4×15=60-1=59]

“That really doesn’t answer my question.”

“I know; but what I said was true. Let it lay Sheriff. If and when you need something lethal like the M433 or M72A7, you know who to contact. It’s a limited supply and we would be ill-advised on wasting them on practice.”

“What if I got a search warrant and looked for them?”

“You wouldn’t find them.”

“You’re bluffing.”

“Try me. Face it, we’re both in our late 60s and won’t live forever. Go along with us and your department will inherit everything we have when we’re both gone. We think you’ll be pleasantly surprised.”

“Ok.”

°

Like First Sergeant Ott suggested, FEMA finally showed up, or should I just call them what they were, jackbooted thugs. They didn’t have any food, except at the ‘Relocation Centers’. The centers were east of Mountain Home where the ash fall ‘wasn’t as bad’. Un-huh, the ash fall wasn’t all that bad in Baxter County.

We loaded up all of Steve’s firearms and ammo and headed for Jonesboro; his day job was a History Professor at ASU in Jonesboro, teaching Medieval History. We had one heck of a time tracking him down because he lived in Lake City and the University was on hiatus.

“You’re the folks from Mountain Home, aren’t you?”

“You remember; good. We came over to see you Sergeant because my friend Steve died of radiation poisoning and I inherited his gun collection. We got a lot of pleasure and an education reading TOM and Jerry stories. Since your father didn’t make it I decided to give Steve’s gun collection to you, with the ammo.”

“My full name is Derek Spencer Ott but I go by Spence. What did he have?”

“Largest to smallest, a Tac-50A1R2, A Super Match, a M1A Loaded, a HK417, a HK416, a 590A1, a PT1911B, a Browning Hi-Power, a Walther PPK in .380 and an integrally suppressed AWC Ruger Mark III Amphibian. A large supply of extra magazines including 100 25 round CMI magazines for the M1As. You shouldn’t run out of ammo and everything except the shotgun has a suppressor.”

“What kind of suppressors?”

“The Tac-50 has the Elite Iron and the other rifles, Surefire. The handguns all have AWC.”

“Are the AWC the best?”

“I don’t know, but they seem to work and are what the dealer suggested so they’re either the best or had the highest markup.”

“What the hook?”

“You get what we brought regardless. Do you have any influence with FEMA?”

“A little; sometimes they get in over their head and call on us for support. They giving you trouble?”

“Not yet. By the way, do the designations M72A7 and M433 ring a bell?”

“What, no Mk 211MP?”

“We brought that; 26 cans, along with 16 cases of the 750gr Hornady AMAX match. There are 19 M72A7s and 95 M433s you can pick up when you’re in our area.”

“I’ll talk to the Captain and suggest we go to Mountain Home and visit the guy in charge of FEMA. No guarantees but if I can persuade the Captain to suggest we might withhold support, FEMA might listen to him. I used to live in the area; first Gassville and then Flippin. My ex-wife’s family is from Flippin.”

“Jolene?”

“No, Mary.”

°

TOM had mentioned Derek’s first wife, Jolene and his second wife, Mary. I’m sure there’s a story there but he didn’t offer and we didn’t ask since it obviously wasn’t any of our business.

Derek didn’t show up for a while and I didn’t really know how to construe the delay. When he and his Captain did show up, the Captain was relaying orders from Brigade level. His unit was part of the 142nd Fires Brigade which consisted of:

- Headquarters & Headquarters Battery
- 1st Battalion, 142nd Field Artillery Regiment (M270A1 MLRS)
- 2nd Battalion, 142nd Field Artillery Regiment (M109A6 Howitzer)
- 1st Battalion, 181st Field Artillery Regiment (HIMARS) (TN NG)
- 1st Battalion, 117th Field Artillery Regiment (M777 howitzer) (AL NG)
- F Battery, 142nd Field Artillery Regiment (Target Acquisition Battery)
- 142nd Signal Company
- 217th Brigade Support Battalion

Specifically, he was Top of F Battery, 142nd Field Artillery Regiment (Target Acquisition Battery), the counter fire target acquisition unit. He was driving and the Captain was his only passenger. They stopped by our acreage first and he and I loaded the 'packages in the trailer the HMMWV was towing. There were 3 'packages', M72A7 LAWs, M433 40mm grenades and assorted hand grenades from smoke to fragmentation.

"Mr. and Mrs. Reynolds, Sergeant Ott relayed your concerns. Rather than act on my own, I took the matter up the chain to the Brigade Commander. We have heard of isolated incidents around the state but no one actually stepped forward to raise the issue before now. What can you tell us of what's been happening?"

"That's difficult Captain because we haven't actually witnessed people being rounded up and transported. However, after the volcanic events, Judy and I passed out provisions we had collected from several area stores to people in Yellville, Summit, Flippin, Cotter, Gassville and Mountain Home.

"From what we've seen, the first 5 communities no longer have any residents and the population of Mountain Home is shrinking at an alarming rate. We found ourselves in the position of becoming advisers to the Baxter County Sheriff, probably due to my military background."

"The First Sergeant said you retired as a Command Sergeant Major."

"That's right Captain, 37 years."

"Why didn't you stay for the 40?"

"I was due to reenlist to reach 40 and a rumor was making the rounds that we were going back to Afghanistan. I'd seen all of Iraq and Afghanistan I cared to see and figured it would just my luck to get my hind end killed on my last enlistment, so I quit. Considering what happened in the 2008 elections, it was the right choice."

"We're in contact with the Mountain and they're sitting tight for the moment and running the remaining government from that location. The war was very limited in scope, primarily due to China having a limited number of nuclear weapons and our sinking 3 of their 5 Jin-class subs.

"Yellowstone had been under careful observation for about 5 years but no one expected Cascadia to subduct and trigger the Cascade Range, the San Andreas, Long Valley or Yellowstone. We had a limited reaction on the New Madrid Seismic Zone due to the energy from Long Valley and Yellowstone being transmitted through the upper mantle."

"Excuse me; lunch is ready if the two of you would like to join us for lunch. It's nothing special but it is home cooked," Judy advised our guests.

We had a working lunch, with our sharing everything we knew about the local events. The Captain indicated that he'd been directed by the Brigade Commander, a Bird Colonel (O-6) to resolve the issue or radio for assistance and the Colonel would set FEMA straight.

"Captain, Judy and I are Reserve Deputies and advisers to the Baxter County Sheriff. Would it be ok if we tailed along in case those Jackboots get nasty?"

"Was your wife also in the Army?"

"No sir. I'm confident that she'll pull her weight. What did the two of you bring for weapons, M9s?"

"Exactly."

"Would you prefer HK416s?"

"The civilian version?"

"The military version loaded with PPU match grade ammo and a dozen M433s each."

"Know a Supply Sergeant?"

"I knew several. They weren't the source of the H&K firearms. Yes or no?"

"Yes."

"Sergeant, will you give me a hand loading magazines?"

"Be glad to Sergeant Major."

As soon as we got to the shelter, Derek asked, "Are you nuts?"

"If FEMA does give the two of you problems, you'll be glad you have the weapons. Sometimes the mere presence of a firearm…"

"That's from 'The Armed Citizen' in *The American Rifleman*. Dad had over 50 years when the ash got him.

"Are you 100% sure they didn't make it?"

"Actually no. They didn't have gas masks or a bomb shelter, so it's an educated guess. Phone service has been restored to most of southern California and I haven't been able to reach them at any of the land lines or on their cellphones."

"Don't bury him until you see the body. Where would they head if they did survive?"

“Probably Lake City, he has my address.”

“You realize that most of the communications in that area go through Los Angeles, don’t you? LA was hit so it could be nothing more them losing long distance.”

We didn’t bother with the bayonets because TOM had claimed in his stories that Derek said, “If you’re close enough to use a bayonet, you’re too close.” They’d brought their body armor so I didn’t offer them IOTVs. The Captain took my HK416 and Derek took Judy’s HK417. I called the Sheriff on the radio and gave him a heads up and advised him we’d be accompanying two Army representatives. The Sheriff said he’d round up the man in charge of FEMA and have him in his office.

°

“Are you the man in charge of FEMA in the area?”

“I am; Seth Brown at your service.”

“I understand, Mr. Brown that you’re rounding up local residents and transporting them to ‘Relocation Camps’.”

“That’s true. What concern is it of the Arkansas Army National Guard?”

“I’ve also been told that you’ve been relocating people who have no desire or need to relocate.”

“Most of the people don’t know what they need.”

“This still America, Brownie. If they don’t want to go, you have no right to force them.”

“I’ll be the judge of that.”

“By order of Colonel James Whitman, you are hereby ordered to cease and desist. Fail to heed these orders and the Guard will arrest all FEMA employees in Arkansas and advise the other states in Region VI to do the same. Furthermore, the Arkansas Army National Guard will check out each ‘Relocation Center’ and release anyone being held against their wishes, effective immediately”.

“You wouldn’t dare!”

“Try me.”

“Mr. Brown, my office full supports the National Guard in this matter. You aren’t per-chance related to Michael D. Brown are you?”

“No, I am not. Why do you ask?”

“Oh nothing much, you just seem to have a lot in common with him. From this point forward, the Baxter County Sheriff, my office or representatives of the Arkansas Guard will supervise who you send to the ‘Relocation Center(s)’.”

“You’ll do no such thing! Our orders come from the very top.”

“Like anyone would believe that RP would issue orders that; Colonel Whitman checked with the Mountain and FEMA Region VI has not been declared a disaster area. You are without standing and I again order you to cease and desist.”

“Go to Hell!”

Mr. Brown turned on his heel and began to move off. The Captain called “Halt!” Mr. Brown didn’t appear to have heard him. “First Sergeant, that man is escaping.”

Bang

“Not anymore Captain.”

“Sheriff, I’ll radio for backup from Fort Chaffee. Can you round up the FEMA people and hold them until my troops arrive?”

“It would be my pleasure Captain. The FEMA Camp is over east on US 62 and north on County Road 842. We’ll show you where when your people arrive.”

°

According to the map on my computer, FEMA has ~630 ‘Relocation Centers’ around the US.

World War Three – Chapter 16

World War Three and a lot of seismic activity added up to 2 major events. Derek's father claimed that bad things happened in 3s. Judy and I had brought that up earlier at different times and if one counted the problems with FEMA, we'd had our 3. The Sheriff and Captain seemed to think that the problem with FEMA was an effect of the second disaster and not a disaster in and of itself. Sort of like Katrina was the disaster and someone named Brown couldn't handle the situation. Last I knew Michael D. Brown was a talk show host for a radio station in Denver. That's a good job for a lawyer. Is Denver still there? Yes; but is Denver habitable?

With the passage of time, the government got caught up on my military pension payments and the grocery stores were restocked allowing us to fill in our STS foods. We inventoried our LTS foods and came up with a list to fill. This time around, we rented a diesel fueled Bob truck and a 1,000 gallon tanker to haul diesel fuel with us (from our tank). Judy and I assumed the trip would take 10 days or more and asked the Sheriff if someone could make pass by our place once or twice a day. They would, if they could.

We took a little bit of everything on the trip because the places we usually got our LTS were buried under ash and we had to choose alternates. We didn't go north and west, we went south to Louisiana. There was a place there called Survival Unlimited and they carried Mountain House and Nitro-Pak LTS foods. Even if they charged more, part of the cost would be offset due to our lower fuel usage.

We had already replaced the grains in the pails so our principal interest was in replacing the freeze dried food. They didn't carry the Nitro-Pak Hungry Man MRE, but Nitro-Pak was out of them more often than they had them in stock. Excluding the MREs, we got everything on our list. That said I'm not sure the reduced fuel usage offset the going price. But, we paid in cash and cash wasn't all that popular in Arkansas. I can say that because gold was above $2,500 an ounce. The government was still around, apparently in the Mountain, if the Captain wasn't lying.

We picked up some more ammo, too. Not that we needed it, but the PPU was pretty good stuff and the price was right. They also had Carl Gustaf NATO 5.56×45 62grn 1,000rd can on 10 round strippers for $375 a can. Berden primed, but I don't reload.

◦

"You aren't going to believe who showed up at my place," First Sergeant Ott said."

"Your father?"

"How'd you know?"

"Have you ever seen the John Wayne movie, *Big Jake*?"

“What does that have to do with anything?”

“Your father is a big John Wayne fan. The most repeated line in *Big Jake* was *I thought you were dead*. You didn’t have any proof he was dead; the only evidence you had was that you couldn’t reach him by phone. Did he like the Super Match?”

“He most certainly did. However he had to pass on the Tac-50 because he couldn’t pick it up. So instead, he took a PT1911B, 590A1, HK416 and PPK.”

“All with silencers?”

“Yes. He only took 12 M433s because they go about ½ pound each. Someone in supply came up with some of those old M61 grenades and made him a very happy man. He doesn’t get around very well so we found one of the heavy duty wheelchairs rated at 600 pounds and added spare batteries, a gun rack and trailer to haul matériel. Oh, and we rigged a canopy for shade.”

“Which rifle does he use as his primary rifle?”

“A Loaded M1A with iron sights and a suppressor. He also took the newer model 51663 Mossberg 590A1 with the OKC3S Marine bayonet. We couldn’t fill one request he had.”

“What was that?”

“Something about someone named Gunkid and an Assault Wheelbarrow. He settled for a MICH helmet and IOTV with level IV plates.”

“Did they all make it?”

“Yep, all 6 and I have wall to wall people until they get a place rented.”

“I would think there would be many vacant homes.”

“There are, that’s not the problem. The problem is we can’t locate the owners.”

“Why would that be a problem? Your father was big on salvaging.”

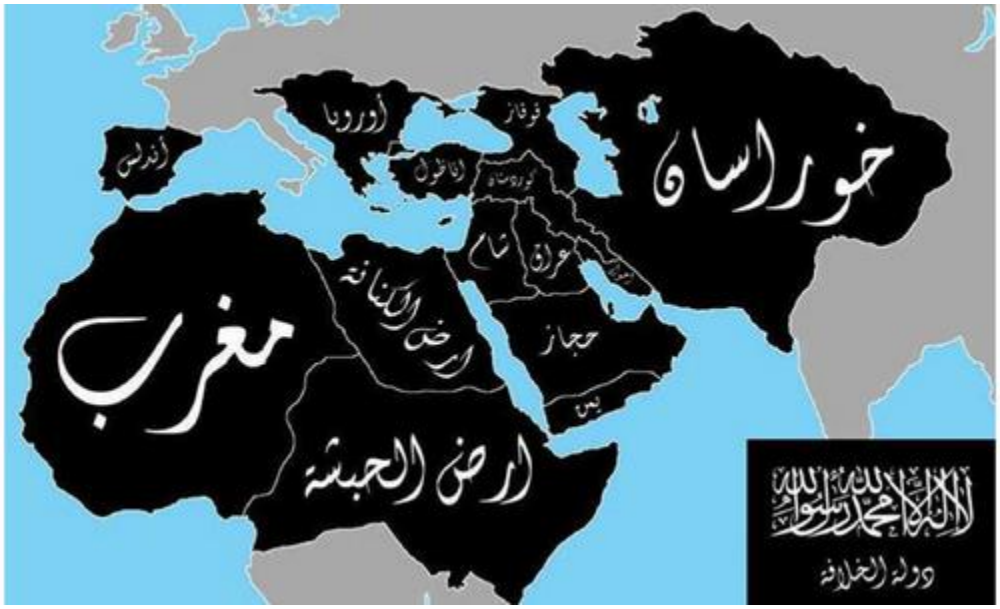
“He is also big on taking only truly abandoned property as salvage. For example, if we found homes with bodies that could be cleaned up, he’d go for it. Without bodies, he says we have to assume the owners will return forcing them to move again. FEMA made a pass through northeastern Arkansas and collected the bodies for burial as soon as the ash began to thin; they didn’t mark the properties where they removed bodies like they did after Katrina.”

“How old is he?”

“He was born 23Mar43, so he’s 76. He only has 2 plus years to achieve his personal goal of outliving my grandfather.”

“Perhaps we’ll have the chance to prove his theory that bad things happen in 3s.”

“Damn, I sure hope not. He’s focused on the Middle East at the moment because on the insurgents declaring a new Muslim Empire. He’s said he has a sinking feeling in his gut that some guy named Grand58742’s prediction is correct. Since the 6 party talks with Iran haven’t born fruit on the nuclear issue he’s asserting that an Islamic Union is being formed to take out Israel. I haven’t had time to read the story he sent me titled *Normal*. Check this picture of the new Caliphate out.”



“It gets better; *on 29 June 2014, the militant Islamist group formerly known as the Islamic State in Iraq and the Levant declared territories under its control in Iraq and Syria to be a Caliphate, and demanded all Muslims pledge obedience to its leader, Abu Bakr al-Baghdadi, whom it referred to as Caliph Ibrahim.*”

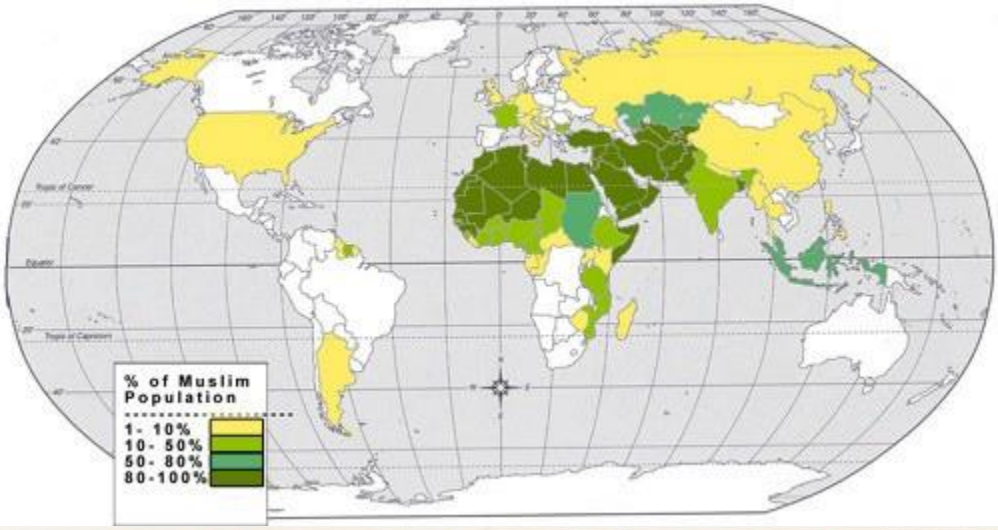
“But Iran is Shi’a, not Sunni and ISIS aka ISIL is Sunni.”

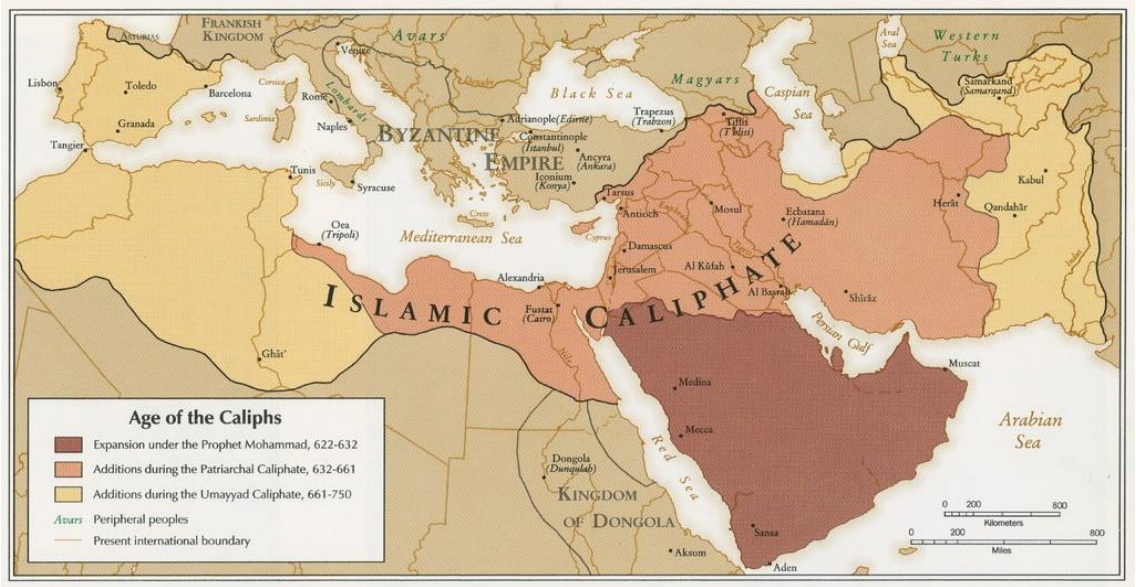
“He has more maps identifying Muslims by location in the same part of the world. The first shows the distribution in the Middle East and Far East. The second shows the worldwide Muslim distribution and the third shows the historic Caliphates. Dad is suggesting that Grand58742 had it right and we’re going to have another World War along more traditional lines, ergo, Islam against the world.”

“Do you agree with his assessment?”

“I think I do and if you consider the distribution of Sunni versus Shi’a, Iran is in for a rude awakening.”


Muslim Distribution
Sunni
Shia
Russia
Kazakhstan
Mongolia
China
North Atlantic Ocean
France
Spain
Ukraine
Belarus
Poland
Germany
Romania
Turkey
Iran
Iraq
Syria
Afghanistan
Pakistan
India
Saudi Arabia
Yemen
Oman
Algeria
Libya
Egypt
Morocco
Mauritania
Mali
Niger
Chad
Sudan
Nigeria
Ethiopia
Somalia
Kenya
Tanzania
Democratic Republic of Congo
Angola
South Atlantic Ocean
Indian Ocean
Burma
Thailand
Vietnam
Malaysia
Indonesia
Philippines
Sri Lanka


% of Muslim Population
1- 10%
10- 50%
50- 80%
80-100%


Age of the Caliphs
Expansion under the Prophet Mohammad, 622-632
Additions during the Patriarchal Caliphate, 632-661
Additions during the Umayyad Caliphate, 661-750
Avars Peripheral peoples
Present international boundary
FRANKISH KINGDOM
Avars
Magyars
Western Turks
Black Sea
Caspian Sea
Aral Sea
Mediterranean Sea
BYZANTINE EMPIRE
ISLAMIC CALIPHATE
KINGDOM OF DONGOLA
Red Sea
Arabian Sea
Persian Gulf
Lisbon
Toledo
Barcelona
Rome
Naples
Granada
Tangier
Tunis
Syracuse
Venice
Adrianople (Edirne)
Constantinople (Istanbul)
Ancyra (Ankara)
Iconium (Konya)
Trapezus (Trabzon)
Tiflis (Tbilisi)
Samarkand (Samarqand)
Tarsus
Antioch
Damascus
Jerusalem
Alexandria
Fustat (Cairo)
Oea (Tripoli)
Ghat
Mosul
Ecbatana (Hamadan)
Al Kufah
Al Basrah
Shiraz
Herat
Kabul
Qandahar
Muscat
Medina
Mecca
Dongola (Dunqulah)
Aksum
Sanaa
Aden
0 200 800
Kilometers
0 200 800
Miles

I realized that TOM was guessing. Given that, his record of guessing wasn't all that bad. He stayed tuned in to multiple news sources, including several English language foreign news sources, when the internet was available. Several years back, he'd run a little news series on Frugal's. Here's an excerpt:

SANTA MONICA, California (AP) – Governor Arnold Schwarzenegger's return to his alma mater turned into an exercise in perseverance when virtually his every word was accompanied by catcalls, howls and piercing whistles from the crowd.

Schwarzenegger's face appeared to redden during his 15-minute commencement address Tuesday to 600 graduates at Santa Monica College, but he ignored the shouting as he recalled his days as a student and, later, his work as a bodybuilder and actor.

Ignore them, Arnold, they probably won't vote for you anyway.

The last line or some variation appeared after each news article. So, he's a smartass, what else is new? One of the things I found to be interesting was his perseverance. He wanted an M14 rifle from the time he first read about them in 1956 and pursued that dream until he got one in 2006… 50 years later. The government paid $104 for the select fire version and he paid ~$1,750 (including sales tax) 50 years later for a semi auto version with match barrel. $104.00 in 1956 had the same buying power as $770.82 in 2006. He bought 1; the government bought 1.5 million and didn't pay sales tax. He said the rifle was $1,599.00 plus sales tax of 8½% and the NCIS fee.

Did he get ripped? Well, that Loaded M1A he bought fired <0.8 MOA at 500 yards with iron sights… so apparently not. Did I mention that was shooting using South African surplus? Did I mention that First Sergeant Ott was the shooter? Remind me not to piss him off.

It wasn't really all that far to Jonesboro and Lake City lay just a few miles further east. Judy and I discussed driving over just to meet TOM; however, we ultimately tabled the idea because we didn't want to get that far from home, again. I would have thought that TOM would have selected the HK417 over the HK416 due to his favoring the 7.62×51mm cartridge. Although the HK417 was select fire, he apparently didn't have anything in 5.56×45mm, so his choice was logical to fill that niche.

°

World War IV had begun before World War III, given the timing of the events in the Far East when compared to the events in the Middle East. The buildup to WW IV began, again, on 18Dec10, while the events that led up to WW III may have commenced in roughly the same time period but came to a head much faster. A major naval response to the Far East began under Obama and ended shortly after his successor took office. At that time US involvement was limited to a single Carrier Strike Group in the Middle East and with most of the Pacific Carrier Strike Groups being deployed or on standby to

deploy to the Far East in response to Chinese claims concerning the China Sea and the conflicts with the 6 nations mentioned previously.

Obama had threatened over the Ukraine and supplied funds to Syrian insurgents. For its part, the Ukraine had embraced the European Union and Putin had backed off. He went so far as asking the Duma to withdraw their consent to the presence of Russian troops in the Ukraine. Like Obama, his concerns turned to the Middle East and with the declaration of the new Caliphate, increased Russia's support of Iran and Syria. Further, he said not a word when Obama returned a small contingent of military personnel to Iraq to protect the US Embassy and another group to work with the Shi'ite military of Iraq under Nouri al-Maliki (Shi'a).

During the same timeframe, 2014, Hamas was pushing Israel, attacking with Iranian supplied rockets and Israel was responding with increased bombing of targets in the Gaza Strip and the West Bank. Further, to put a fine point to the escalating violence, Israel had bombed Syrian targets near the Golan Heights.

The US had fought a 2 front war during the first decade of the 21st Century in Afghanistan and Iraq and had been forced to withdraw from Iraq when the al-Maliki government, after agreeing to the *US–Iraq Status of Forces Agreement* but declined a guarantee of immunity from Iraqi courts, a concern for American commanders in the field who also had to worry about the Sadrist response should troops stay and the general state of Iraq's readiness for transfer of power.

°

We found ourselves at that point in time of being 5 years after declaration of the new Caliphate. The plans hadn't followed the proposed timeline although they had progressed significantly. Africa had, for the most part, embraced the new Caliphate. The Kurds were an entirely different story.

The majority of Kurds are Sunni Muslim, belonging to the Shafi school. There is also a minority of Kurds who are Shi'a Muslims, primarily living in the Ilam and Kermanshah provinces of Iran, Central and south eastern Iraq (Fayli Kurds). Mystical practices and participation in Sufi orders are also widespread among Kurds.

The Alevis, usually considered adherents of a branch of Shi'a Islam with elements of Sufism) are another religious minority among the Kurds, living in Eastern Anatolia. Alevism developed out of the teachings of Haji Bektash Veli, a 13th-century mystic from Khorasan. Among the Qizilbash, the militant groups which predate the Alevis and helped establish the Safavid Dynasty, there were numerous Kurdish tribes. The American missionary Stephen van Renssalaer Trowbridge, working at Aintab (present Gaziantep) reported that his Alevi acquaintances considered as their highest spiritual leaders an Ahl-i Haqq sayyid family in the Guran district. If nothing else, the Kurds are skilled fighters. Saladin, a Kurd, defeated the Crusaders by forcing a truce.

TOM's other concern, according to Derek, was the extent of the Muslim population in the US. Relying on the 2010 census, TOM was claiming that though Muslims represented no more than 5 million people in the US, if one-tenth of one percent were from the radical school, we had ~5,000 capable and willing to cause trouble for the remainder of the population. A few bullets from a magnum caliber hunting rifle through a Hi-voltage transformer could bring down the already shaky electrical grid.

TOM had been assigned the task of 'protecting the home place' and took to his duties with a responsible attitude. The Sheriff wouldn't give TOM a concealed carry permit so the Walther was carried a little higher on his right leg and the weapons on his 'combat wheelchair' were carried in condition 1. Because he had the trailer, he carried 3 bandoleers of M433 40 mm grenades. He also followed the Field Manual guidelines for carrying hand grenades in the pockets on his magazine pouches.

"Judy, I believe I agree with TOM's assessment of the situation as outlined by his son. We are in a build up to WWIV."

"How long did the war with the Muslims last in *Normal*?"

"I'm not really sure. His daughter Hope was 4 years old the first time Thomas saw her after he went to Europe to battle the Islamic Union."

"Do you want to go to Lake City and discuss his views with him?"

"We've had this conversation before and decided not to make the trip. It would be just our luck to have another earthquake on the New Madrid if we drove over there."

"I am curious enough about one thing to justify the trip."

"What might that be?"

"Does he really have Cowboy guns?"

"The Sergeant is due back in a few weeks; I'll ask."

We didn't have Cowboy guns for two related reasons. We were pushing 70 and had enough ammo that we should never run out before we died of old age. The US hadn't been invaded by armed forces since Pancho Villa hit Columbus, New Mexico in 1916. During the 20th and 21st centuries, the invasions had been mostly limited to illegal aliens.

A few Muslims had tried to pass themselves off as Méxicans to infiltrate our southern border and an unknown number pulled it off. They didn't even try Canada due to the significant Canadian and American Border Patrol agents. We had serious doubts that these were Lion Claw teams. ISIS had a clear hold on Iraq and Syria and was attempt-

ing to take over Lebanon and Jordan. They had deferred any action against the Emirates' or Saudi Arabia.

Some of the other countries associated by the Arab Spring had fallen or were close to falling under the control of ISIS included Tunisia, Egypt, Monaco, Sudan, Libya and Bahrain. When RP had taken office, he had to deal immediately with World War III between China, Japan and the US plus the nuclear attacks against Washington and Beijing. Then there were the seismic events in the western US.

Some of the 'unaffected' Middle East countries were considered US allies, including Israel, Saudi Arabia and to a lesser extent The Emirates' and even Yemen. At best any effort the US troops provided Iraq was limited in scope due to the small number of American troops involved. I wondered if things would have been different if the US hadn't invaded Iraq. Did we really win? In light of Arab Spring and subsequent events, like ISIS, I think not. ISI merged with Syrian insurgents forming ISIL which was translated by many as ISIS (Islamic State in Iraq and Syria). Shortly thereafter, ISIS was renamed the *Islamic State*.

That sounded a whole lot like Grand's *Islamic Union*. As of 2010, over 1.6 billion or about 23.4% of the world population were Muslims. There were Muslims in nearly every country in the world. Even China, before WWIII, had its share of problems with Muslims. Would that 23.4% of the world population be able to control the other 76.6% of the world population? As much as I hate to steal a line, the answer is probably no… if things were *Normal*. Things weren't *Normal* because of WWIII and the North American seismic activity.

We were, in fact, barely getting our feet back under us. Judy and I had it much better off than most because we were grid independent and had more food stored than years of life left. Moreover, we had the means to keep what we had in most circumstances. The cabin gave away nothing about its construction to the casual viewer. While it wasn't bulletproof, it came close.

It had more secrets than the US government. For example, the job foreman that said, "Clever", made a suggestion and I told him to go for it. After the soil was fully compacted to about 7' below the top of the block, pedestrian underpasses were installed; 2 on the Franklin Stove end. One below the beginning of the ramp and 4 on each side. They were connected and led to another (locked) Swiss Blast door in the side of the ramp. The tunnels each led to a small gun port allowing me and whoever was with me to defend the cabin since one couldn't shoot through the cabin walls.

If a person examined the cabin floor closely, the section of floor that lifted to give access to the ramp could be identified. When we were in the shelter, deadbolts held the floor section closed and the movable metal strap was turned downward; otherwise one simply pulled up on the movable metal strap to begin the opening process. The floor section was partially counterbalanced and it really wasn't hard to lift, maybe 30-40 pounds. Surely something had been missed, if one were to believe TOM.

ISIS was renamed the Islamic State and the new Caliph was designated as Ibrahim Awwad Ibrahim Ali al-Badri al-Samarrai. His name was Ibrahim ibn Awwad ibn Ibrahim ibn Ali ibn Muhammad al-Badri al-Samarrai and his nom de guerre Abu Bakr al-Baghdadi. On 4Oct11, the US State Department listed al-Baghdadi as a Specially Designated Global Terrorist and announced a reward of $10 million for information leading to his capture or death. He earned a master's degree and a PhD in Islamic studies from the University of Islamic Sciences in the Baghdad suburb of Adhamiya. Only Ayman al-Zawahiri (the Egyptian physician), chief of the global al-Qaeda organization, merits a larger reward ($25 million).

Prominent Sunni Muslim scholar Yusef al-Qaradawi said that the declaration of an Islamic caliphate by jihadists fighting the governments in Syria and Iraq violates sharia law. Which brings to mind a question… does it matter what Yusef al-Qaradawi thinks if the Islamic State gains total power?

If I recall one of TOM's early stories, he mentioned being moved to California by the Iowa Department of Revenue and looking for housing in Pasadena. His friend Paul Jackson was along and advised him he was looking in the wrong neighborhood when Paul observed that the neighbors were all Muslims. He took an apartment in Panorama City, which was a Hispanic area and had a neighbor who was deported for being a member of MS-13. Perhaps that explains his claim that having bad luck is better than having no luck at all. They moved to Palmdale when all the large vacant lots had apartment buildings moved in to low income Hispanic housing.

World War Three – Chapter 17

Although I didn't ask, I'd be willing to bet that TOM/Derek had at least 5,000 rounds of PPU match 7.62×51mm in 168gr and 175gr and the like number of rounds in 5.56×45mm M885. If the rule of like father, like son applied, they also had 2,000 rounds per handgun except the Walther/Sauer and 2,000+ rounds of 12 gauge. I would further guess that the 168gr was a mix of FMJ and soft point and the 175gr was BTHP. He's pretty consistent on his choice of ammunition.

Unlike *Normal*, the triggering events were totally different. Six nukes were exploded in the US in *Normal*, while the number of strikes during WWIII was higher, but primarily counter-force as opposed to counter-value. We got only a little of radiation from Oklahoma City, the strike upwind of our location. And when the volcanoes let loose we had less than the anticipated amount of ash.

We did set 2 6" pipes in concrete at the entrance to the acreage and string a heavy duty log chain to bar vehicle entrance. The chain was Transport Chain Grade 70 $^{5}/_{16}$" × 25' Standard Link chain. We were safe against pickups if nothing else. We also added PIR sensors, the hard wired version, to pick up people walking around the gate. That Radio Shack 102dB Piezo Siren would wake the dead. There were 2 sirens, one in our bedroom and one in the shelter, wired in parallel.

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Most of what went on in the Middle East escaped notice of those of us focusing on the Far East. It was only after WWIII and the seismic activity that the focus shifted to the Middle East. To be honest, it was a sometimes thing because news was hard to come by. We had been battered and or participated in the two actions in the first decade. Furthermore, Afghanistan turned into the longest war the US was engaged in, running from 2002 through 2014. Iraq had lasted 7 years with a forced conclusion by Nouri al- Maliki. This ultimately led to ISI to ISIL to ISIS to IS, our current concern.

Before the World War, the US was probably the most informed nation on Earth. There were the Big 3, ABC, CBS and NBC. There were the newcomers, CNN, HNN, Fox, CNBC and MSNBC who fought for their slice of the pie. It was the age of Television Network News combined with Cable Network News. If one didn't agree with the commentator on a particular issue, change the channel. When I wanted International News, I went to the Internet and brought up CNN's International Edition or an English language version of major news organizations from around the globe.

Sometimes I spent half a day comparing the various versions of an event to get a glimmer of the truth, because everyone was a spin doctor. Post Yellowstone, things changed when news was hard to come by and the Internet was down.

The news today was my 70th birthday present when the Sheriff came by to collect our badges. Strangely he said nothing about our illegal weapons and told us we were both

on call as advisers. Beats a sharp stick in the eye; and speaking of eyes, we both had to get lens replacements because our old eyes had the beginnings of cataracts and lost the ability to change focus. God bless modern medical technology, the replacement lenses were imbedded progressive lenses and took some getting used to. The medical treatment included a pair of Oakley sunglasses which we were advised to wear whenever we were outside during daylight.

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Breaking news on the Ham net – *IS has invaded Turkey, a NATO member.*

Some Hams on the East Coast picked up broadcasts either in Arabic or Turkish or both. It seemed that IS had invaded Turkey along the same route the US was denied use of to invade Iraq in 2003. Well, I suppose turnabout is fair play. I hope that IS realizes that they're in the heart of Kurdistan and the Kurds are nothing if not vicious fighters. The main Kurdish opposition group PYD and its armed branch YPG have been battling Al-Nusra Front and Islamic State of Iraq and the Levant since 2012. Committees for the Protection of the Kurdish People (YPG) expelled Al-Nusra Front and ISIS members from the strategic town of Ras al-Ain in Hasaka province and have fought them in northern Raqqa province in July 2013.

Then again, Saladin (Ṣalāḥ ad-Dīn Yūsuf ibn Ayyūb) is never around when he's really needed. TOM says *The Cold War Never Ended* and the Muslims claim *The Crusades Never Ended*. Perhaps this little military action will settle both for all time and forever. Yeah right, only when one side wins decisively. However, Russia taking an interest in the Iranian nuclear issue as well as taking an interest in the new Islamic State is heart-warming news. Furthermore Putin's 2014 reversal of his position on the Ukraine really helped. Maybe Putin is like most Americans and simply doesn't like Obama, the most unpopular president since World War Two.

What's wrong with the previous assertion is that for all practical purposes, the Muslims won the Crusades and are holding a grudge against Europe for ever starting them to begin with. The battle is between Christianity as represented by the Roman Catholic Church and the various branches of Islam. And as the conflict in the Middle East points out, not all the branches of Islam are in agreement.

"Rollin, is the invasion of Turkey by IS a good thing or a bad thing?"

"Probably a bad thing because if they conquer Turkey, that advances them into the European Continent. Turkey lies both in Europe and Asia."

"You've been following this closer than I have, what's it all about?"

"In simplest terms the difference between various branches of Islam. With that resolved the ongoing desire for revenge for the Great Crusades. Islam won't be happy until the other 76.6% of the world embraces Islam."

“How can we keep up with what’s happening over there?”

“Most of the major news networks haven’t recovered from the war or seismic activity so it’s going to be difficult. My best guess is probably from the Ham net. The east coast is only 1 hour ahead of us in time and if hams spread the word on the net, we should know something within an hour or two.”

“Someone is at the gate intercom, you get it Rollin.”

“This is Smoke, help you?”

“Smoke, Derek. I brought someone to meet you.”

“I’ll be right down to unlock the padlock and drop the chain.”

The guest was an old man. It looked like he used a haircutter without attachments to cut his hair; he was buzzed all the way. Maybe 5’4, 125-30 and he hobbled, using a Hurry-Cane. He wore moccasins with no socks, light blue stretch jeans, tight in the waist and loose in the ass, and a polo shirt about 2 sizes too large. His head was topped with the grungiest straw hat I’ve ever seen; the sucker needed an oil change 20 years back. It was obviously Derek’s dad Gary.

“Tired Old Man?”

“Only since 2004, but I was the first one to use the name.”

“I’m pleased to meet you. My name is Rollin James Reynolds but I go by Smoke. Come on in and meet my wife Judy.”

“I hear you got Folgers. I’d kill anyone you want for a can of Folgers. Add a few cartons of Kool’s 100s and I’ll take out the whole family.”

“How about 24 cans of Folgers and 60 cartons of Kool’s?”

“I don’t have any nukes.”

“That’s a gift for what you’ve given us.”

“Hell, that’s more money than I got from selling 199 CD’s.”

“Did Jerry make it?”

“Don’t know but I think so; his older brother, Terral, lives in Winnemucca.”

“How old is he?”

“He’s 10 years and 3 months younger than me. He was born on July 3, 1953. His story *Bugging Home* is semi-autobiographical; it was Jerry and his father clearing out the old storm shelter.”

“We’ve read everything either of you have published. I’m a fan of most of the firearms you like.”

“How did you come up with an extra set?”

“Those weren’t mine originally. They belonged to a friend named Steve who chose to leave the shelter too early.”

“That’s a heavy door and these walls must be just shy of 2 foot thick; bulletproof?”

“Bullet resistant.”

“Cold rolled steel?”

“Only the doors; the walls have 2 layers of 1¼” Lexan.”

“The ballistic stuff?”

“Yes.”

“Each layer has NIJ rating of 4?”

“Yep.”

“Won’t block a .50BMG or a 40mm M433.”

“Right.”

“Shelter below the cabin?”

“Yep.”

“I won’t pry anymore, I was just speculating on what I was seeing.”

“TOM, meet Judy, my wife; Judy, Tired Old Man.”

“TOM, do you really have Cowboy guns?”

“We have enough to ‘go around’ and it includes Marlin Cowboy rifles in .45 Colt and .45-70, all shooting ‘full power’ loads or reloads. The revolvers are Ruger pre-2006 Vaquer-

os. The 7½" is carried in a single holster and the 5½" and 4⅝" carried in a double crossdraw rig. Kirkpatrick Leather Company, Laredo, Texas."

"Laredo Bowie?"

"One for each rig plus a tomahawk and 24" Latin Machete for each person. We picked them up in Phoenix on our way east. I couldn't get into McMillan; they have better doors than you do. God does that coffee taste good. Bum a smoke?"

"Here's my pack; help yourself. Derek, come with me and we'll haul the coffee and cigarettes upstairs."

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Back in the Prologue, there was a reference to: According to the Navy, it was the first exercise of its new Fleet Response Plan (FRP), the purpose of which was to enable the Navy to respond quickly to an international crisis. Here's an excerpt:

TRANSFORMATION IN OPERATIONAL CONCEPTS – ENHANCED EMPLOYABILITY

"Our security will require transforming the military…a military that must be ready to strike at a moment's notice in any dark corner of the world."

– President George W. Bush, 1 June 2002

The demands of the Global War on Terrorism have underscored the need for forces that can quickly be deployed to any "dark corner of the world," and arrive ready for the entire range of combat operations. The forward expeditionary nature and rapid surge capability of the Navy - Marine Corps Team combine to make our Services ideally suited to meet these challenges by providing combat-ready forces nearly anywhere in the world, by projecting decisive power with sea-based forces, and by enabling the rapid arrival of transformed combat-ready forces from other Services and Agencies. We are transforming the methods by which we organize and train, deploy, and employ naval forces to enhance our ability to rapidly transition across the continuum from peacetime deterrence operations to major combat operations. The Global Concept of Operations was developed to guide our planning to distribute naval striking power simultaneously to a greater number of locations, deterring aggression, providing immediate response, and setting conditions for the rapid deployment of additional forces. A number of innovative initiatives are being developed to increase the employability of the various elements of the naval force. Seamless Scalability of our Marine Air-Ground Task Forces (MAGTFs) will allow us to more rapidly close and combine additional forces, increasing operational tempo and seizing early opportunities for Joint Force Commanders. Interwoven combinations of transformed forward-deployed, pre-positioned, and surge capabilities will support Joint Forcible Entry Operations by leveraging the speed and mobility gained by our control of the maritime domain.

A. Global Concept of Operations

The Navy and Marine Corps met the challenges of the Cold War by deploying in Carrier Battle Groups and Amphibious Ready Groups, which carry Marine Expeditionary Units (Special Operations Capable), both supported by the Combat Logistics Force and supplemented by the Maritime Prepositioning Force (MPF). Now we are transforming that force to meet the challenges of the Global War on Terrorism by implementing a new Global Concept of Operations.

To support the forward deterrent and rapid response requirements of today and tomorrow, new organizational constructs such as the Carrier Strike Group (CSG) and Expeditionary Strike Group (ESG) are being instituted as key components of the global integrated naval force. Organizing naval deployments around ESGs and CSGs will increase the number of independently employable naval strike groups that provide Regional Combatant Commanders with greater operational freedom and scalable joint response options. In the far term, forward naval operating forces will be organized into an Expeditionary Strike Force (ESF), elements of which will train together to ensure readiness for a wide range of contingencies. The ESF will consist of CSGs, ESGs, and Maritime Prepositioning Groups (MPGs). The ESF can be enhanced with the introduction of forcible entry-capable Marine Expeditionary Brigades in combination with in-theater assets. The ESF will bring complementary capabilities to Air Force Air and Space Expeditionary Task Forces, Army Future Forces, and Joint Special Operations Forces for integrated joint operations across the spectrum of conflict.

B. Fleet Response Plan

The requirement to be able to swiftly defeat aggression in overlapping conflicts called for in the 2001 QDR has necessitated a focus on developing new surge capabilities to complement and capitalize on our current competency in providing immediately employable forward-deployed naval forces. The recently created Fleet Response Plan (FRP) will significantly increase the rate at which we can augment deployed forces as contingencies require. Under the regular rotation approach, the training, manning, maintenance, and readiness funding practices of the Inter-Deployment Readiness Cycle (IDRC) were optimized to meet the requirements of Global Naval Forward Presence Policy. While a modest number of forward deployed units were at peak readiness, the majority of ships and associated units were not deployed and thus at a point in their IDRC that made it difficult and expensive to swiftly “surge” to a crisis, conflict or for Homeland Defense.

The FRP features a change in readiness posture that institutionalizes an enhanced surge capability for the Navy. Under the guidance of Commander Fleet Forces Command (CFFC), a revised IDRC is being developed that meets the demand for a more responsive force. With refined maintenance, modernization, manning and training processes, as well as fully-funded readiness accounts, the Fleet can consistently sustain a level of at least 6 surge-capable carrier strike groups, with two additional strike groups

able to deploy within approximately 90 days of an emergency order. In parallel with this, the Naval Reserve Force is embarked on a fully integrated active-reserve transformation to a more flexible unit structure. Part of this transformation is focused on providing a rapid surge capability of skilled aviators who have trained with active-duty units to reinforce them and rapidly boost their ability to generate combat sorties.

C. Flexible Deployment Concept

The enhanced and expanded readiness availability delivered by the Fleet Response Plan provides the President with unprecedented responsiveness. Instead of predictable, lock-step, 6-month deployments to pre-determined regions in support of the Global Naval Forward Presence Policy, the Flexible Deployment Concept allows units that have attained high readiness to embark on deployments of varied duration in support of specific national priorities such as Homeland Defense, multi-national exercises, security cooperation events, deterrent operations, or prosecution of the Global War on Terrorism…often in multi-Carrier Strike Group formations. These deployments provide "presence with a purpose" and can also occur in less predictable patterns, thereby forcing potential adversaries to adjust to our operational timelines. The sustained readiness created via the Fleet Response Plan will enable the Flexible Deployment Concept.

Flexible Deployment Concept implementation will occur under the emerging Joint Presence Policy. Naval implementation of these new presence requirements will be carefully monitored to ensure that schedules and OPTEMPO standards are adhered to so that our unprecedented force levels will not result in uncertainties for our sailors or allies.

D. Enhanced Networked Seabasing

The recent Navy-Marine Corps concept for Enhanced Networked Seabasing (ENS), a subordinate operating concept that supports the NOC, provides a vision for how the naval Services will use more employable naval forces to provide Joint Force Commanders (JFCs) with the ability to project and sustain multi-dimensional power from the sea. Recognizing that the declining number of overseas bases, and the uncertain degree of future of host nation support, ENS exploits the strategic, operational, and tactical mobility available to those who control the sea. More than just a collection of platforms, it is a new way of projecting, employing, and sustaining expeditionary naval forces to support and enhance the enduring missions of the naval Services: sea control, deterrence, forward presence, and power projection. ENS provides a "place" for increasingly employable naval forces to surge "to", whether they are supporting theater security cooperation efforts and the demands of the Global War on Terror or conducting Major Combat Operations. The sea base will integrate: Joint Command and Control capabilities; Expeditionary Strike Groups, Marine Expeditionary Brigades, Carrier Strike Groups, Maritime Prepositioning Forces, Combat Logistics Forces; and emerging high-speed sealift and lighterage technologies. Reflecting the synergy achieved through the use of combined arms, ENS will concentrate the many technical improvements in naval warfighting systems and networked naval forces – both current and future. Enhanced Networked Seabasing enables forward deterrence and assures access from the sea for the joint force

without dependence on static land bases, ports or airfields in the Joint Operations Area (JOA). Like the NOC, ENS also demonstrates the ability of the Navy – Marine Corps Team to develop and pursue a common vision that enables and exploits the capabilities being developed by the other Services and Agencies.

E. Streamlined MAGTF Scalability

Recent operations including ENDURING FREEDOM and IRAQI FREEDOM reaffirmed the scalability and tailorability of our MAGTFs. The ability to rapidly combine Marine forces from around the world under a single commander provides joint warfighters with a powerful operational advantage, one that enables the potential of other joint capabilities. As the Navy – Marine Corps Team pursues innovative methods such as Seabasing to support the JOCs, however, we are working to speed the seamless blending of Marine Corps units from around the globe as crises demand. The ability to more rapidly fuse MAGTFs from in-and out-of theater along with integrated naval tactical aviation and other elements of the flow-in echelon to support our single battle concept will require careful consideration of our MAGTF training and readiness cycles. The experimentation campaign SEA VIKING 04 is being developed in part to help support key decisions and strategies to support this goal. Along with the Navy's transformation in the operational availability of our ESGs and CSGs, streamlined scalability of our MAGTFs will provide Joint Force Commanders with superior strategic agility by more rapidly and effectively integrating forward-deployed, pre-positioned, and surge forces.

F. Maritime Contribution to Joint Forcible Entry Operations

Building on the Global Concept of Operations, the Fleet Response Plan, and the Flexible Deployment and Enhanced Networked Seabasing concepts, maritime Joint Forcible Entry Operations (JFEO) forces provide flexible and adaptable warfighting capabilities, staying power, and self-sufficiency that are uniquely tailored for creating opportunities for early-entry capabilities of other joint and coalition forces. The capabilities required to execute Forcible Entry – providing strategic agility, operational reach, and tactical flexibility- will also allow new methods for conducting a wide range of operations across the spectrum of conflict. In addition, the utilization of naval forces in these types of contingencies enables a compressed timeline for planning and movement.

The naval concepts for maritime JFEO support parallel – vice sequential – execution of all phases of forcible entry with a shortened time of response. They provide for the simultaneous defeat of a multi-dimensional threat without in-theater host nation support. These concepts enable a rapid, scalable, pre-emptive Joint Forcible Entry capability, tailored to the threat and mission. By the 2015 time frame, naval forces employing ESGs, CSGs, Amphibious Forces, and MPF (Future)-equipped MPGs will provide the sea-based assets required to ensure dominance across the joint operating area, and compress the timeline for assembling a MEB to 7-14 days. This concept will transform naval forces' ability to conduct forcible entry and will preclude the adversary's integration of his anti-access capabilities against joint and coalition efforts.

TRANSFORMATIONAL CAPABILITIES

The Navy and Marine Corps are working in a synergistic fashion to transform the capabilities in each of the Naval Operational Concept's Naval Capability Pillars: Sea Shield, Sea Strike, Sea Base, and FORCEnet.

A. Sea Shield

The Navy – Marine Corps Team will provide the naval defensive capabilities that will enable the joint force to operate effectively despite adversary efforts to deny theater access to US forces. Sea Shield will extend precise and persistent naval defensive capabilities not only throughout large maritime areas, but also deep overland to protect joint forces and allies ashore. We will achieve these goals by exploiting global sea control to defeat enemy area denial/anti-access threats including aircraft, missiles, small littoral surface combatants, mines, and submarines; as well as terrorist and asymmetric threats, both in CONUS and abroad. The sections that follow discuss transformational concepts and capabilities being pursued within the Sea Shield mission capability areas of air and missile defense, undersea warfare, anti-surface warfare, and force protection.

1. Air and Missile Defense (AMD)

Key Elements of Transformational Improvements in Air and Missile Defense. Transformational efforts in air and missile defense focus on two areas: the initial deployment of sea-based ballistic missile defense capability, and dramatically improved and integrated air and cruise missile defenses. Efforts in ballistic missile defense will provide a completely new sea-based capability. This transformational capability will greatly expand the options of the Joint Force Commander for protecting forward-deployed US and coalition forces as well as key host nation targets from missile-borne chemical, biological, radiological, nuclear, and high-explosive (CBRNE) weapons, while also supporting homeland defense ballistic missile defense operations. Naval air defense efforts will provide the existing sea-based system with far greater capabilities against a broader range of targets and under a wider spectrum of circumstances by integrating both Navy and Marine Corps systems to extend protection to naval, joint, and coalition forces at sea and ashore. Together, these capabilities will enable projection from the sea of a highly effective air and missile defense umbrella that reaches over the horizon and deep inland, extends from ground level to the exo-atmosphere, and defends against multiple types of aircraft, ballistic and cruise missile threats.

AMD Transformational Concepts and Capabilities – Near – and Mid-Term (2005-2015).

Theater Air and Missile Defense (TAMD), the ability to shoot down hostile aircraft and cruise missiles, will be based upon the participation of US, allied and coalition air defense elements at sea and ashore to effect improved defensive response times, more rapid and effective sensor-weapon-target pairings, and long-range engagement of threats. The Navy's Cooperative Engagement Capability (CEC) and the Marine Corps'

CEC-based Composite Tracking Network (CTN), including a new “backbone” of joint common tracking algorithms, will fuse radar data across the battleforce, creating a common network of sensors and weapons that extends the naval air defense capability over sea and shore. These advances will also reduce requirements for airborne Defensive Counter Air (DCA) patrols, thus freeing sorties for offensive operations, enhancing naval platforms’ ability to deliver precise offensive effects.

The AEGIS mid-course intercept BMD system, slated for deployment at the end of the decade, is designed to destroy theater-range ballistic missile re-entry vehicles while they are moving through the exo-atmosphere. AEGIS BMD-capable ships will be linked to a network of airborne, space- and land-based sensors and directed by a highly responsive command and control system. Leveraging the inherent ability of naval forces to operate with sovereignty in international waters, these ships will provide detection, command and control, and engagement capability throughout the battle-space against theater-range ballistic missiles. In the near term, AEGIS combatants, deployed in the right place at the right time, will also provide early surveillance and track data on longer-range ballistic missiles that endanger the United States to the Ballistic Missile Defense System (BMDS) for potential engagement by ground-based, mid-course interceptors.

The Navy – Marine Corps Team is working with the Missile Defense Agency (MDA), which assumed responsibility for development of all ballistic missile defenses in January 2002, to develop and field a ballistic missile defense system (BMDS) for protection of the US homeland by 2004. The objective of this system, which is being developed in accordance with National Security Presidential Directive 23 (NSPD-23), signed by President Bush in November 2002, is to protect the United States and her allies from the threat of long-range ballistic missiles. The Navy is working with the MDA to accelerate deployment of the sea-based element of this capability as part of the Initial Defensive Operations (IDO) capability in October 2004.

The Navy and MDA are working together to provide engagement solutions against ballistic missiles at a variety of altitudes and phases of flight – including a sea-based system, which is designed to intercept longer-range missiles while they are in midcourse flight. Progress in this effort – recently re-named the AEGIS Ballistic Missile Defense System – has included a series of test flights in which a missile launched by a Navy cruiser at sea hit its targets on three out of four occasions. With respect to lower-altitude, endo-atmospheric ballistic missile intercepts, MDA is currently planning a series of experiments, beginning in 2003, to assess sea-based terminal BMD solutions, as part of a range of alternative means to fulfill this mission requirement.

The Navy, in conjunction with the Joint Staff and MDA, is also exploring a sea-based terminal missile defense capability. It is currently conducting a study of the requirements and options to develop a capability to defend American and allied forces in areas requiring a protected footprint against TBMs, particularly where land-based TBMD options are restricted. It is anticipated that the study will be followed by creation of a roadmap for developing the sea-based terminal defense capability through the integration of existing technology and future capabilities, as they become available.

Detect/Track. In addition to incorporating joint and national air and missile defense capabilities, the Navy and Marine Corps are working toward a transformational capability to detect and track threat aircraft and cruise missiles at significantly longer ranges using integrated airborne, sea-based and land-based sensors. While part of this capability derives from new sensors and platforms, much of the synergy in detection and tracking accrues from the ability to share and leverage sensor data through a Single Integrated Air Picture (SIAP), which is made possible by extensive sensor networking. Joint development and acquisition of other systems, joint development and implementation of new tactics, techniques and procedures that take advantage of the newest technologies, and joint training on these new technologies will speed transformation and ensure its long-term success.

As part of Naval Integrated Fire Control – Counter Air (NIFC-CA), the E-2C Advanced Hawkeye (AHE), equipped with an ADS-18 radar and Space-Time Adaptive Processor (STAP), will significantly improve our ability to detect and track air and cruise missile threats in difficult overland and littoral environments. Cueing from the E-2C AHE will improve the detection and tracking capability of the Active Electronically Scanned Array (AESA) radar, installed in the F/A-18E/F fighter and the Joint Strike Fighter. In recognition of the important contribution of the E-2C Advanced Hawkeye, the Navy is examining adding in-flight refueling to the E-2C to increase the persistence of its surveillance capability and remove the potential need for performing handovers during critical stages of an engagement. Through CEC and CTN, the AHE radar data will be fused with other naval force air surveillance sensors such as the next-generation AEGIS SPY radar, VSR on the DD(X), the new CG(X) solid-state radar, and USMC Multi-Role Radar System (MRRS) to create a SIAP.

The MRRS is designed to be the first land-based sensor ashore. The High mobility Multi-Wheeled Vehicle (HMMWV) mounted radar will possess the mobility required to keep pace with supported maneuver elements to fill gaps in naval Air and Missile Defense coverage created by extended littoral operations. The MRRS is transportable by CH-53 or MV-22. It will provide cueing information for the Complementary Low Altitude Weapons System (CLAWS), Stinger MANPADS and Avenger. The radar will provide detection and tracking of small radar cross-section cruise missiles and Unmanned Aerial Vehicles.

The Marine Corps AN/TPS-59 (V) 3 long range air surveillance radar tracks theater ballistic missiles and calculates their launch points and impact points and forwards this information to joint command centers and weapon systems. The AN/TPS-59 (V) 3 will be replaced by the Highly Expeditionary Long Range Air Surveillance Radar (HELRASR), which will provide air surveillance of TBMs with increased of battlefield mobility compared to the AN/TPS-59 (V) 3.

The Common Aviation Command and Control System (CAC2S) will provide real-time shared awareness of the joint battlespace and provide commanders and weapons controllers with intuitive decision aids. The ultimate advantage of CAC2S is its expedition-

ary packaging and modular application that allows commanders the flexibility to employ CAC2S from the sea base, ashore, and aboard airborne platforms. The shared awareness of the enemy, friendly and non-combatant situation, coupled with decision aids and collaboration tools, will increase the speed of command and decision making in a time competitive environment.

The AEGIS SPY-1 radar will serve as the foundation of the Navy's ability to detect and track ballistic missile threats. In the near term, planned upgrades to this radar will enhance its detection and discrimination capabilities for effectively performing the BMD mission. Over the longer term, the advanced solid-state radar to be deployed with CG(X) will provide even greater power, sensitivity and discrimination to enable sea-based detection and tracking to keep pace with the evolving ballistic missile threat.

Decide/Task/Relay. The networking of sensors, command and control elements, attack platforms, and weapons to share information in real time to increase the speed of command and decision making will be realized through upgrades to CEC/CTN and the fielding of the SIAP. Advanced BMD command and control systems are being developed for joint theater and homeland defense by the MDA. CAC2S will provide real-time shared awareness of the joint battlespace and provide commanders and weapons controllers with intuitive decision aids. The ultimate advantage of CAC2S is its expeditionary packaging and modular application that allows commanders the flexibility to employ CAC2S from the sea base, ashore, and aboard airborne platforms.

The Office of Naval Research is sponsoring the Advanced Multifunction Radio Frequency Concept to investigate the feasibility of developing a system with a common set of radio frequency apertures whose function would be determined by software. This system could integrate and simultaneously support multiple beams for radar, electronic warfare (EW) and communications functions. Replacing legacy disparate radar, EW and communications system would have significant impact on the physical design of ships allowing them to be made more stealthy and efficient, and would reduce the number of independent logistic support chains needed for sustainment of the systems.

Engage/Attack/Assess. In the near-to-midterm, naval initiatives will provide a number of new weapons and platforms for engaging air targets from the air, from the sea, and from ground-based platforms.

Air-to air engagements will be conducted by an upgraded version of the Advanced Medium-Range Air-to-Air Missile (AMRAAM). A pre-planned product improvement (P3I) to AMRAAM will provide the missile with improved kinematics, as well as GPS and enhanced data-link capabilities.

New naval aircraft such as the stealthy Joint Strike Fighter (JSF) will increase our ability to provide air defense at extended ranges and over extended durations. JSF will also include software systems that enable the aircraft to participate as both sensors and shooters in the new integrated air defense. Similarly, upgrades to the weapons control

systems for F/A-18 will enable these aircraft to fully support collaborative air defense engagements.

In addition to air defense from aviation platforms, the Navy is developing a new surface-to-air missile, the ship-launched Extended Range Anti-Air Missile (ERAM). In the future Joint Integrated Fire Control Architecture, this new ship-launched missile will be fully capable of conducting over-the-horizon engagements to its maximum kinematic range against manned/ and unmanned aircraft, cruise missiles flying over the land and the sea, and short range TBMs.

The Marine Corps' CLAWS integration within the NIFC-CA architecture allows for engagements of cruise missile threats attacking deployed ground forces and assets ashore via netted and shared E2-C sensor data. When deployed ashore, CLAWS extends the battlespace by providing the joint force additional overland cruise missile defense capability. CLAWS, provides the speed and flexibility required for enhanced air defense capabilities in the execution of Expeditionary Maneuver Warfare.

For BMD, the achievement of an engagement capability is focused on the development of a hit-to-kill warhead for the SM-3 missile. This weapon will be utilized to intercept theater class ballistic missiles while they are in the exo-atmosphere and will utilize AEGIS Weapon System data integrated into the BMDS. Progress in this effort, recently renamed the AEGIS Ballistic Missile Defense System, has included a series of test flights in which a missile launched by a Navy cruiser at sea hit its target on three out of four occasions.

There's more but you get the idea. Didn't happen, but that's government for you. They're still thinking they'll get the bugs out of the Joint Strike Fighter.

World War Three – Chapter 18

“We made it 36 cans TOM, and 60 cartons for you and Steve’s leftover cartons for Derek.”

“Smoke, my name is Gary. That TOM business got started on Frugal’s because TOM was easier to write than Tired Old Man. We’ll go easy on the coffee, too. We’ll probably limit ourselves to 2 pots a day to make it last. The truth of the matter concerning the firearms you provided is that I can’t pick up that Tac-50 and telescopic sights and I never saw eye to eye so Derek is going to get the Super Match back. I’ll keep the handguns, the Loaded M1A and the 590A1 with bayonet. I wish he’d give me back my original Loaded M1A, but I can’t see 500 yards, let alone hit a target at 500 yards. But I’m working with a machinist putting on a bayonet lug on the flashhider and adapting a 16” 1905 bayonet to the M1A.”

“That’s the bayonet that fit the M1903 Springfield and the M1 Garand?”

“Yes and a new scabbard, the M3, which was developed to replace the earlier scabbards. The M3 scabbard had a fiberglass body, with a metal throat, and was equipped with hooks which fixed to the cartridge-belt. I’ve located a parkerized bayonet and the M3 scabbard and we’re working on the bayonet lug. The problem that came up during WWII in the pacific theater was the long type 99 Arisaka rifle with the 15¾” bayonet; our Marines were at a disadvantage.”

“Are you guys going to be able to make it work?”

“He said, if it doesn’t work, I don’t owe him anything. He was a Chief Machinist Mate in the Navy and I have a track record with them.”

“The guy who built Thumper?”

“Damn that was my first story. I doubt Bob Root is alive today but a Gatling gun is legal according to the BATFE, God rest their miserable souls. I never met a gun law I didn’t want to break.”

“I heard about the PPK. Do you really believe they won’t find it higher on your leg?”

“I double damn guarantee they won’t find it on me.”

“How can you be so sure?”

“I put it in Sharon’s purse. The guns aren’t concealed; they’re just out of plain sight. But I figure they’ll be so busy worrying about the HK416 Extended with the grenade launcher they won’t look any further.”

“You added an Extended lower?”

“Hard to come by, but I got it done; four positions, S, 1, 3, A.”

“I’ve read your stories and if I hadn’t seen a Special Ops type with one I wouldn’t have believed it.”

“Well, I got one thing wrong when I described the Enhanced lower. I said it was 4th generation. What was 4th generation was the stock, not the lower. I am convinced that all it takes to convert an M16 type to Enhanced is the internals, like the sear, and the externals like the fire selector. My machinist is looking into what we’d need to do to convert the HK417. It might be as simple as I described in *The Dome Series* or we might need to scale up the internals and change the sear to 4 positions as well as do something about the fire selector. I’m not big on 3 round burst so if the HK417 only has S-1-A, it’s not a big deal.”

“What do you carry on your wheelchair?”

“I haul everything but the Tac-50. I used to be fat, anywhere from 180 to 200 pounds, back when I was drinking. When I was out running around in the late ‘90s, I slimmed down pretty good. After I gave up and went home, I went back up to 175, but started to watch my intake. I wasn’t drinking and between the absence of booze and watching what I ate, I was down to 133 by early 2014. As long as I can keep it between 128 and 133 I don’t worry about it. I want to keep my Body Mass Index in the 22 range, to make it easier on my heart. I don’t have a heart problem and don’t want to get one. Anyway, a standard wheelchair is rated at 300 pounds so I probably wouldn’t need a heavy duty model.

“But Derek got me one and it’s all fixed up to haul the weapons, has extra batteries for a longer run time and can pull my supplies. Could I have another cup of coffee?”

“Cream or sugar?”

“Nope, black, just like my soul.”

We were coming up on meal time and we had home baked bread and bean soup. They stayed for supper and Derek said something about getting a motel because it was so late. We pointed out we had a second bedroom in the cabin and the master bedroom in the shelter wasn’t occupied. TOM took the second bedroom and Derek the shelter bedroom.

Breakfast the next morning was fairly simple, reconstituted frozen orange juice, coffee, pancakes and Vermont maple syrup.

“That was really good, thank you. I love that Vermont Maple syrup. I suppose we’d better hit the road Derek so you can show me where you lived in Gassville and Flippin before we head back to Lake City. It was a pleasure to meet you folks and the next time

Derek comes this way, I'll have him bring a copy of all of the stories on my computer including the one I almost never finished, *Dream a Little Dream of Me*."

"Why did you almost not finish it?"

"It was illogical. You'll see when you read it. Jerry liked it but I couldn't wrap it up, so I didn't try for a long time. I know your name from somewhere, but I can't remember from where."

"I sent you a file containing an article that dated to 2012 about the Sunburn missile."

"That was you? Huh, small world; I'm thinking about working on a story based on that and all that has happened since. Thank you."

Judy filled their ½ gallon Stanley stainless thermos after warming the inside with boiling water and off they went. I wouldn't be terribly shocked if both showed up again. TOM had never seen the shelter causing me to wonder why. Maybe the ramp was just too much of challenge. That was an easy fix; we had an AmeriGlide Heavy Duty (500#) Stair Lift installed. Besides people, we could move any object weighing less than 500# that would fit on the seat.

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"How are we on money?"

"We have some without cashing out gold or silver; what do you need?"

"I don't specifically know Rollin. It's similar to that time we needed cigarettes and you only stumbled on the need by accident. Maybe it will come to us if we review each category we have stored. Let's eliminate them."

"Ok, Food – covered, Water – covered, Air – covered, Shelter covered, Protection – covered, You don't need hygiene supplies – covered, Fuel, coal and firewood – covered, Spare vehicle parts – covered, Generator supplies – covered and Spare batteries, PV panels and parts – covered."

"How many spare batteries?"

"One per bank."

"We should double that and add additional spare inverter/charge controllers. We should go through the first Medical Cabinet and replace any outdated drugs, and anything with tape. I should talk to my doctor and get some prescription analgesics and you should talk to yours and get more chill pills. Is there anything for radiation sickness?"

“Concerning your doctor, try for Norco 10/325. Potassium Iodide or Iodate and Radiogardase (Prussian Blue) are drugs for radiation. The Potassium Iodide (KI) or Iodate (KIO_3), over-the-counter drugs, saturate the thyroid gland blocking the absorption of radioactive ^{131}Iodine and Radiogardase is an insoluble 500mg capsule, Rx only, used to remove ^{137}Cesium and ^{201}Thallium after its ingested. It reduces the biological half-life of ^{137}Cesium from ~110 days to ~30 days and ^{201}Thallium from ~8 days to ~3 days. The only other drug I’m aware of is DTPA, diethylene triamine pentaacetic acid, plus calcium or zinc. Begin treatment with Ca-DTPA, and then change to Zn-DTPA for maintenance, as indicated. That’s generally introduced by an IV.

“Obviously Radiogardase and DTPA are given under a doctor’s direction. There’s a shortcut to that information on my desktop labeled REMM. Double click on it to bring up the data shown on the CDC website about radiation. It’s updated annually and has all kinds of guidelines and information. It’s displayed in your web browser although the information is stored on your computer.

“The old adage was duck and cover. All that’s worth is to lean over and kiss your butt goodbye.”

“If we have the radiation instruments, is it fair for me to assume we have KI?”

“Actually KIO_3 tastes better and we have 24 bottles, enough for 24 adults. I haven’t been able to get the prescription drugs.”

“I’ve got all of that down; do we have any money left?”

“Plenty.”

“I may not need hygiene supplies… but they might be worth their weight in silver when the last shoe drops.”

“What would you get?”

“Maxi-pads, panty liners and tampons and they don’t have to be brand specific; I used Always products for the pads and liners and Tampax for the tampons.”

“Add them to the list. Anything else?”

“Soap to wash dishes, laundry and us. Your washer and dryer are almost 15 years old and we should have something as a backup… like those large laundry twins. And, more comfort foods like candy bars and so forth. We can store them in one of the freezers.”

“I think there’s plenty of room for them… anything else?”

“May I think about it for a while and bring it up tomorrow?”

“Tomorrow! Tomorrow! I love ya Tomorrow! You’re always A day A way!”

“A little of that goes a long way.”

“I wonder what she’s doing these days.”

“Who?”

“Andrea McArdle.”

“I think she was still on Broadway.”

“Past tense is right.”

“Not necessarily; she signed a long term deal with Oceania Cruises as a featured entertainer.”

The next day the list was a little longer but didn’t include anything that would be difficult to locate. The problem was with the prescription drugs and if they would be available at all. The Norco wasn’t hard to get to get as it was a common analgesic with generic description of hydrocodone APAP 10/325. In order to build a supply Doc prescribed it for each of us QID for a total of 240 caplets per month. Six months would build a supply of 1,440. The Xanax wasn’t much harder prescribed 0.5mg TID, again for both of us allowing us to accumulate 1,080 in six months. However, a doctor could no longer prescribe refills and you need a separate written Rx for each fill.

On the other hand he was reluctant to prescribe Radiogardase and DTPA in the two different forms. She didn’t say how she had managed to talk Doc into prescribing the drugs, but she did. He added Neupogen® (Filgrastim). Then there was the matter of waiting for the distributor getting the drugs to the pharmacy to fill the prescriptions. We had ample time to learn to establish IVs, a review course for me and a new course for Judy.

Doc went a step or 2 further prescribing IV starter sets along with the IV sets and full cases of IV fluids in 500ml bags including normal saline, 3 cases, lactated Ringers, 2 cases and D5W, 1 case and D5NS, 1 case plus a small selection of IV antibiotics, with specific instructions. It was easily accomplished because the hospital had a practice arm. Next, we both were certified in CPR. We didn’t have packed red blood cells or plasma and had to rely on the IVs we had. The goal was to stabilize and transport unless the injured person was an attacker. They came under the rule: shoot, shovel and shut up.

With continuing presence of the Arkansas National Guard, at unpredictable intervals, attacks seemed to be a thing of the past. On a rare occasion, Sgt. Ott would stop by with another story… generally unedited. Judy and I found ourselves editing the stories for typos et alia and sending the revised story back to Lake City. Later, we’d receive a

re-edited version where TOM had reviewed our corrections and made corrections to our corrections.

“What’s he working on now Sergeant?”

“He’s not working on anything. He claims he’s run out of ideas. Apparently his original goal was to educate and entertain. He went on to say that the stories were falling short on being entertaining and if people weren’t educated by now, he had nothing left to say.”

“How many does that make?”

“He’s not sure because he combined several stories when he was assembling his CD. The last numbered story was 103 and it’s incomplete.”

“Writer’s block?”

“I don’t think so. He mostly sits in the wheelchair nodding off from time to time. He’ll jerk awake, scope out the neighborhood and nod off again. I really don’t think he’s faking because I can sneak-up on him. When I do that, I’m always ready to grab both of his hands in case he overreacts. He doesn’t move so fast that it’s a problem.”

“Do you have any idea what the next disaster will be?”

“Not really. It will probably be the end of civilization as we know it, TEOCAWKI, over the Middle East.”

“Why would that be the case?”

“My PhD may be in Medieval History but one has to study a lot of history as an undergraduate covering the overall history of civilization and that’s extended somewhat working on the Master’s degree. So, I have a fair understanding of the history of the Middle East. The Crusades were instituted by the Pope to preserve holy sites for the Roman Catholic Church.

“There weren’t just one, two or three Crusades; there were seven major Crusades and numerous minor ones. There isn’t even an agreement on how many major Crusades there were. The Crusaders won some and the Muslims won some and basically, everyone was a loser in one way or another. The Crusades had mostly ended by the Medieval Period but to understand the Medieval Period, one has to understand what led to the Period.

“If you study the Bible from a historical perspective, you see two names, Lord, Yahweh, and God, Elohim. Those are Jewish names while the Arabic word for God is Allah. The Arabs and Jews are all ‘Sons of Abraham’. The Qu’ran refers to all sons of Abraham as ‘people of the book’ and dictates that followers of Allah respect ‘people of the book’. The

three types of adherents to faiths that the Qur'an mentions as people of the book are the Jews, Sabians and Christians. In Islam, the Muslim scripture, the Qur'an, is taken to represent the completion of these scriptures, and to synthesize them as God's true, final, and eternal message to humanity. Because the People of the Book recognize the God of Abraham as the one and only god, as do Muslims, and they practice revealed faiths based on divine ordinances, tolerance and autonomy is accorded to them in societies governed by sharia (Islamic divine law).

"The recent debate on who the Sabians were is directly connected to how to best translate the verses from the Qur'an out of the original Arabic. Basically, there is no agreement on who the Sabians were."

"What about the diaspora?

"The Jewish diaspora began with the Assyrian conquest and continued on a much larger scale with the Babylonian conquest, in which the Tribe of Judah was exiled to Babylonia along with the dethroned King of Judah, Jehoiachin, in the 6th Century BCE, and was taken into captivity in 597 BCE. The exile continued after the destruction of the Temple in Jerusalem in 586 BCE. Many more Jews migrated to Babylon in 135 CE after the Bar Kokhba revolt and in the centuries after.

"Many of the Judean Jews were sold into slavery while others became citizens of other parts of the Roman Empire. The book of Acts in the New Testament, as well as other Pauline texts, makes frequent reference to the large populations of Hellenised Jews in the cities of the Roman world. These Hellenised Jews were affected by the diaspora only in its spiritual sense, absorbing the feeling of loss and homelessness that became a cornerstone of the Jewish creed, much supported by persecutions in various parts of the world. The policy encouraging proselytism and conversion to Judaism, which spread the Jewish religion throughout the Hellenistic civilization, seems to have subsided with the wars against the Romans.

"Of critical importance to the reshaping of Jewish tradition from the Temple-based religion to the rabbinic traditions of the Diaspora, was the development of the interpretations of the Torah found in the Mishnah and Talmud.

"Upon Solomon's death, a civil war erupted between the ten northern Israelite tribes, and the tribes of Judah (Simeon was absorbed into Judah) and Benjamin in the south. The nation split into the Kingdom of Israel in the north, and the Kingdom of Judah in the south. Israel was conquered by the Assyrian ruler Tiglath-Pileser III in the 8th century BCE. There is no commonly accepted historical record of the fate of the ten northern tribes, sometimes referred to as the Ten Lost Tribes of Israel, although speculation abounds.

"So despite Muhammad's teachings, the current interpretation of Qu'ran by the various Islamic scholars leaves non-Muslims between a rock and a hard spot. They won't be satisfied until they rule the world and everyone converts to Islam."

“They’re only 23.4% of the world population! How do they propose to do that?”

“If I knew the answer to that, I wouldn’t be a Professor; I’d be the Chancellor or President of the ASU.”

“And a General in the Arkansas Army National Guard.”

“No way, I despise officers.”

“Run into a butter-bar with his head stuck?”

“More than one; it must be a human condition that when they pin on that yellow bar, the person loses every bit of common sense they have.”

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What followed wasn’t a pretty sight. Iran had managed to complete several single stage nuclear weapons, atomic bombs for those who don’t know. They had some Plutonium but apparently not enough time to build a ‘hydrogen bomb’. So, they built the simple atomic bomb, the gun type used at Hiroshima. They were loaded aboard a Panamanian registered cargo vessel and shipped to the State of Israel and the United States of America. The two leftovers went to Iraq and Syria.

The weapons were on timers and all would detonate at the same Iranian date and time. Unlike previous Caliphs, the new Caliph didn’t have a sole seat of power, he had two. He would be seen in Baghdad one day and in Damascus the next. It seemed that he preferred to travel between the two capitals at night. The Iranians hoped that Pakistan or North Korea would be blamed for the nuclear detonations. If not, they hoped that the damage done to the State of Israel and the United States of American would prevent any immediate retaliation.

The shipping containers were labeled in the language of their destination, Hebrew or English. With the weapons safely dispatched to their destinations, the Iranians focused their energies on completing the shelter system they’d been building for years. While it wasn’t as extensive as Switzerland, Norway, Sweden or Moscow, it would shelter the entirety of their educated population and their military and military assets.

The atomic bombs would be detonated at ground level, producing maximum fallout and they were ‘dirty’ bombs. The term ‘dirty’ bomb could refer to radioactive materials mixed with conventional explosives. The term has also been used historically to refer to certain types of nuclear weapons. Due to the inefficiency of early nuclear weapons, only a small amount of the nuclear material would be consumed during the explosion. Little Boy had an efficiency of only 1.4%. The Iranian bombs were intentionally constructed in the pattern of Little Boy. Four were sent to the State of Israel and fourteen were sent to the United States of America with one going to Baghdad and one going to Damascus.

That was the extent of Iran's HEU, enough for 20 Little Boy type bombs. Iran hadn't done their homework, but what's new. The 3rd North Korean test was an implosion device. The Pakistani devices were boosted implosion devices and India had thermonuclear devices. Just because Iran thought the Jews were stupid didn't mean that they were. Israel X-Rayed cargo from certain points of origin and between Mossad, Shin Bet, Aman (IDF) and the intelligence branch of Israeli Police they knew the origin of the cargo.

When the X-Rays wouldn't penetrate the heavy boxes due to the shielding, the boxes were opened and the contents discovered. The Americans were immediately informed of the discovery and the name of the Panamanian registered cargo vessel. The vessel was identified by satellite and a Virginia-class was sent to intercept and sink it when it passed over the Kings Trough. Not a word of the Israeli or US activities was made public and it was contained to those in the government with the highest possible security level, well above Top Secret.

It was a Pinnacle event except that it didn't:

Generate a higher level of military action
Cause a national reaction
Affect international relationships
Cause immediate widespread coverage in news media
Affect current national policy

It most certainly was clearly against the national interest, thus the order to sink the ship over one of the deepest parts of the Atlantic Ocean. Did I mention that Israel revealed the point of origin of the cargo? But it would not generate a higher level or military action, by the United States. Try to picture what was going through the mind of the Israeli Prime Minister… Shall we use Jericho 3 missiles or bombs dropped by our new Strike Eagles? After they come out of those shelters they think we don't know about…